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Feeding Barns.

Talk with the Farmers' Institute at Manitou, Nov. 27, 1897, by R. Waugh.

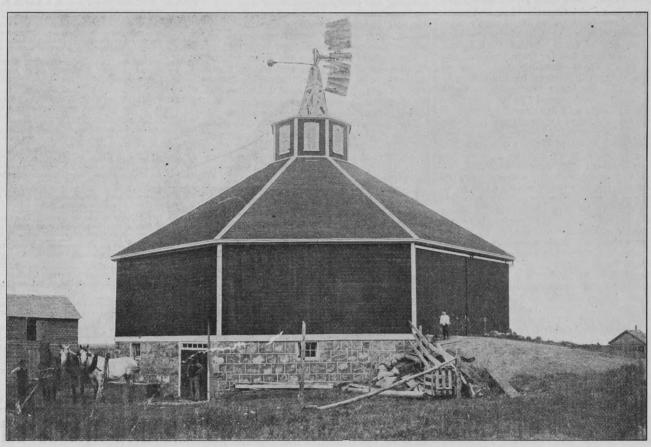
Manitou district was very early in the field as a builder of improved and substantial stock barns, and I know no other

very small indeed. Safety from fire is a big thing for either the field or the group of farm buildings.

But we have hardly time to discuss the stock barn, and I shall confine what I want to say to that alone. Let me say a word in passing about the pioneer buildings of log and sod, in which many good beasts have been bred and fed. They suited our purse and our wants to a wonderful degree, and if we had protected them from the heels and horns and snouts of our beasts they would have done still better. Sod, well protected, is a grand building material, as far as comfort goes. Logs, if they are kept chinked up in the fall, are also excellent, and the boarded stable, where you can shove your middle finger between every board when it is

land that he had not first taken out of it, and so created the finest farm and buildings I know of in this new country

Shelter is a big thing for our houses and gardens, but I would almost put water before everything else. Pure water that will stay pure is a first essential. The seepage from closet and stable has converted many a well into a fountain of disease and death, and even a concrete floor is not always a perfect safeguard. If the pump is at the high end of the barn and the trend of the strata below is away from it, as appears to be the case at Motheral's and Baldwin's, that well is pretty safe. If it is gravel below it is only a question of time till that water is hopelessly polluted. It may be clear and brisk, but that is no proof of purity;



Alex. Cochrane's Octagon Barn, Manitou, Man.

district yet where there is so large a proportion of what I call progressive building, the kind that is most likely to promote the comfort of both man and beast. You have good and comfortable farm houses all round some of them of farm houses all round, some of them of solid stone, with the latest improvements, and of good architectural style, and you have also good granaries, combined with have also good granaries, combined with implement accommodation, built so as to ensure special safety from fire, a great point always. Take the groups of Al. Bedford, at Calf Mountain, and W. E. Baldwin here, and you have my ideal of the way in which the house, the stock barn and the granary should be separated, so as to minimize the danger from fire. They are not far apart, but if one went, the risk of the others burning would be

I know for the torture of poor dumb brutes. Of course, in time the annual output of dung banked round keeps out the wind once it is there, but November breezes are murder to all profit, some-times to the beasts themselves, and if the dung walls stay on year after year, as I have sometimes seen, the horses and dairy cows are liable to mysterious troubles, which I propose to call dunghill fever.

Let us turn now from the old to the new. An old book, some of you may have seen it, advises to count the cost before you start. I am glad to believe that few of these new buildings have a mortgage on them. The late Sam Hanna

seasoned, is one of the cruelest inventions | those bright bubbles often prove the direct opposite to the eye of the skilled chemist. For the whole farm buildings, as well as the barn, I want good shelter, present or prospective. Our average shelter belts and ornamental trees are a downright farce. The money and time spent on the few scraggy trees round our places would, if well directed, have made by this time groves to be admired and do a lot of good. As a rule, they gather more snow than they keep away, and flood our door yards all spring. If there is no natural bush, then plan for a five or ten-acre space to be gradually enclosed by well-planted trees, beginning at the corner most exposed and always leaving the south side open to the last. Inside acted on the principle that he would not put a dollar's worth of buildings on the that have all buildings, garden and small

pasture. I know only one farmer's grove so laid out that I can point to as a model. He is not nearly finished, but he

has begun very well indeed.

If there is a natural slope in the ground, I want my barn to stand east and west, with the back to the north, and plenty of sunlight on the other sides. By digging out, say three feet, at the line of the back wall and levelling up in front to form a broad platform, very little snow will gather and the whole place be always dry. If, say nine feet further is dug into that bank it can be made into root storage all the way along the back of the with doors opening into the barn, barn. but filled from above out of the wagon through sloping shoots that can be covered later on. The road into the upper floor should be wide, as most of you have I don't want roots inside among the cattle, if I can store them in cellars behind, as by this plan can easily be done to good purpose. You have here at Manitou examples of

nearly every variety of good building plans, and I came here now mainly to find out how, after the experience years, your pioneer builders are satisfied. The big bank barn, with all its merits and defects, is an old Ontario idea, and many people here hold on to it. I don't want any beast of mine shut in along the back wall of one of these broad bank barns. It is too damp, too far from the sun, and the profit from housing any kind of beasts there will always be limited. several of your barns the layout is north and south, with good light from the morning and mid-day sun. There is space for a central feed passage, with two rows of heavy cattle facing each other, and space behind to clean out. ter cold wind there can be a few outsiders crowded into these spaces, and you have a covered watering trough supplied from the pump, opened now and then to suit the beasts. For fattening cattle this arrangement is very good, but I don't believe that cows and young breeding cattle should be fed together in that way. Your stables are never so warm and close as those on our model government and private barns. But these model \$10,000 and \$15,000 barns have done more to propogate and spread tuberculosis than all the leaky shacks in Manitoba could ever do. If a poor man's beast does chance to have tuberculosis, a spell at the straw stack in this weather clears him But one diseased beast, among 100 in a big stable at 65° or thereabouts, soon taints the atmosphere of the whole house, and in due time all the country hears of it. A hearty steer meant for the butcher can get no real injury even if a tuber culous old cow is stabled in his company, but where you are to keep a mixed lot of cattle all winter under the same roof, I object very strongly to having those cows with young stock. The cows are generally kept far too warm for other stock, and if one happens to be tainted, that warmth is the very best breeding ground for disease germs, no matter what their Latin names are. I repeat, don't their Latin names are. I repeat, don't keep old cows and young stock in the same house all winter.

The arrangement by which you cut enough off the end of the cattle barn to have a horse stable running across and shut off from the cattle, is as good as I can think of. There may be wisdom in the objection to stabling horses and cattle together. I think so, too.

Mr. Cochrane gives us the best example of an octagon barn I have yet seen. is 24 feet on each side, with 32 feet less length of wall than Mr. Motheral's foursided one, and space inside for five fewer beasts, but much better accommodation provided in the centre for easy feeding, a great point here. If he would take my

plan and lengthen the north and south sides by 8 feet each, he would have the same room as in the square-cornered barn, with 16 feet less building round it, and a lot of useful space in the centre. Mr. Cochrane's horses stand along one side, cut off from the cattle, and the two corner divisions will suit a colt very well.

Octagon building costs more for both inside fittings and roof than rectangular does, but economy does not always mean a smaller amount of first cost. More down the labor bill for attendance ever afterwards may be the truest economy, and the men who do have octagon barns are all strong in that faith. If that well is safe, I am with them on all other points, but if the subsoil is porous or has gravel layer somewhere, the inevitable will come, and the well must be unfit for man or beast.

The stone basement, with baloon frame above, is a leading idea of all our barns, and a windmill on top fills the bill. think the octagon has rather the best of the up-stair arrangement. Mr. Cochrane's can have two roadways right across and fill all but a small space in the centre for working his pumping, crushing and sawing machinery. The feed runs down ing machinery. The feed runs down through shoots into three separate bins below, and a very small space above suffices to work the different machines.

The stones, sometimes the lime, and in this district all the posts and rough wood in joists, cost only the labor of collecting. Where lumber is used all through, the expense is considerable and for octagons rather high. To cut up bought lumber for every purpose must add considerably both to the cost of material and the amount of labor. But those who favor the octagon say the extra cost is more than made up for in the conveniences secured.

Ventilation and temperature are important in a climate with such extremes as The half door plan is all right in ours. summer, for both purposes, as flies don't care much for the shade inside. If they

do, wire screens are desirable.

In winter, the point is to secure enough of pure air without unduly lowering the temperature or causing draughts. winds are due to differences in temperature at different points and it is the in-rush of cold air into our warm stables that causes drafts. Unchinked walls permit of other drafts, but all drafts are more less injurious, and to have pure air without chills is the problem to be met in ventilation. The only source of heat in our stock buildings is the warmth from the animals' bodies. I am told that below 60 degrees is best for feeding, at or above 60 degrees best for cows in milk. If the building is too cold part of our feed goes to make up the extra demand made on the system to maintain the heat of the animal. It is good to have part of the body used up as fuel, the point is to know when to stop waste in that direc-Some people have small pipes here and there in the wall heads, to let in pure air, and they sometimes let out the war n at the same time. We call that air pure that has the proper proportion of oxygen in it, and it may be as pure at 90 degrees as at 20 degrees below. Animals inhale the oxygen to purify their blood as it passes through the lungs. What they exhale has been robbed of its oxygen, and the remained is mixed carbonic acid gas and vapor, which must be again supplied with oxygen before it is fit for use. When cooled this impure air sinks to the bottom of the apartment in which it is used, because it is heavier than common air. If there are no chinks through which pure air can penetrate, this condensed carbonic acid becomes a concentrated poison, which in coal mines is called

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choke damp, and occasionally kills train hands in the Port Huron tunnel. If our ventilation is very defective, our stables may get partially into this condition, and it is the knowledge of this fact that has made some people plan a ventilating shaft open near the floor, and with a second opening near the ceiling. It is assumed that in this way the warm air drawn into the tubes at the ceiling will carry with it most of the heavy and less pure air near the ground. I think that unless we build with very dry lumber that will not swell with the damp breath of the animals, and have a very tight building, a good deal of air will come in and get out without our help, and our methods should aim at helping that process so far as necessary. would carry a square wooden box from an opening in the outside along the building, either above or below the beasts' heads, where it is least in the road. Before nailng down the top board, I would lay

value of the manure produced on our farms. The urine is half the value of the excrement, and if the bedding collects this and holds it, we are on the right track.

Just on this line let me refer to what W. A. Doyle, of Beulah, does with his young cattle. In a building, say 24 feet wide, he has a rack reaching up to the floor above, with a wide trough in front of it along each side. This rack and feed box runs lengthwise of the building, with a 10-foot space for the cattle along each side. Straw, chaff, hay, whatever is the feed, is filled into this rack from a loft above. The short straw and chaff falls into the box below, and would most of it be lost. But a man takes a bag of chop of some sort and sprinkles over and through that short stuff each day. induces the beasts to eat up what is really often the best part of the feed. That division holds yearlings. At the inner end there is a moveable division through across bits of lath, and in this way provide a space all the way along, by which which a wagon can be drawn, and beyond them off such walls. The cattle do not

As was desired by the speaker, a considerable amount of discussion was called out by this talk. Mr. Armstrong wanted Mr. Waugh to explain, if he thought stone as good as wood, or better, why frost rime stood on the inside of stone walls, which is not the case with wood.

Reply.—If cattle are confined in boarded stables with no air space, frost will con-dense the breaths of the beasts on wood the same as on stone, and this will form a thick coat of rime in either case that will help to keep out the cold. It is the lack of ventilation that makes the air of stables more moist, and under intense frost the moisture will freeze to the walls and roof But that does no harm to the stock till it melts and runs down. The Esquimaux live all winter in houses with walls of snow or ice and are quite healthy. If a pig lies against a stone wall, whether it shows frost or not, it will get harm, and



Cattle Barn and Herd of Shorthorns, owned by Chas. Scott, near Augusta, Wis.

pure air will get in to the atmosphere the stable without unduly cooling it. The impure air will find its own way out, through chinks in the ceiling, and, if need be, through upright shafts regulated by sliding openings. Some people find a few wall head openings all they want, and in fine days throw a half-door open at the sunny end of the building. I think sunlight as valuable as pure air, and hope to see more use made of it in our stables. The only place I hate to see sunlight is in an implement shed, and if some men I know could turn their buildings round it would be a great gain to both their beasts and binders.

It may be confidently asserted that onehalf the manurial value of the dung made in this country is lost through the un-thinking way in which we handle what we make. My idea is that to keep all our stock, except cows actually in milk, loose all winter, and tramping down, till it is two to four feet deep, all their droppings and bedding, would double the

that a space for calves. Their hay rack is up against the wall, and in the partition between them and the yearlings is a tub holding a big block of rock salt, at which the beasts on both sides can lick at pleasure. During the winter the manure from all these young cattle accumulates to a depth of several feet and after seeding is 50 degrees a little was better for feeding all these young cattle accumulates to a depth of several feet, and after seeding is over this rich accumulation is spread over and worked into the stubble land kept for that purpose. It is spread and plowed into the land as it is taken out, and that land could be sown in barley the same year, if wanted, to be followed by a wheat crop the year following. Mr. Doyle crop the year following. Mr. Doyle generally grows a crop of flint corn on the top of this manure, which he cultivates so as to work out all the foul seeds he can. He raised in this way one crop of corn and three of wheat before he plowed that land again. That is not a familiar experience, perhaps, with the most of us, but I still venture to ask, "Do you know anything better?"

50 degrees a little was better for feeding temperature, than above 50 degrees. To secure the best gains a good proportion of the food taken must go off as effete matter through the skin and kidneys and be consumed at a low temperature in the lungs, producing heat. There is no outdoor exercise and the lower temperature must aid in using up more of the waste material of the blood through the lungs.

Pure air, so called, is composed of four parts of its bulk nitrogen, to one of oxygen, and the crucial difficulty is to keep the air of the stables as near normal purity as possible without chilling the In some way more oxygen must be got in without undue waste of the heat em-anating from the beasts themselves.

When this is successfully done, the stock is hearty and has a good appetite, making good gain from the feed used. If for the sake of saving feed or from mistaken ideas about comfort, too little pure air is admitted, the beasts get more delicate and sometimes fall off their feed. Somebody who knows the value of ventilation then throws open a window or two, and every beast near those windows will most likely catch cold. Smaller openings, through which the air can enter in small quantities, and get spread so as to mix gradually with the air inside, are in use here. The fact that the feeding stock in most of these barns stand a few feet away from the walls enables the fresh air coming in near the ceiling in small pipes (the ordinary way here) to get well mixed with that inside, and thus avoids the cold draughts that pour down on the beast nearest the opening when the heads are up to the

All were in favor of biggish tubes or boxes being led from the upper part of the stable to and through the roof, with, of course, sliding valves to control the size of the opening. Where there are size of the opening. Where there are openings for feed from above a good deal of ventilation takes place, but to let it mix freely with the stored feed is a bad thing. It must always be kept in mind that nature does all she can to keep the air we breathe in a condition of normal purity and equable temperature. Wise builders, even of cattle barns, keep this principle in mind and seek to control the natural currents so as to get what they want in the simplest way. It is not It is not necessary to go to the top of the house for pure air to be brought to the bottom, and Dr. Young brought out the idea that even in the same upright shaft or nearly level air opening in the walls, there might be one current going out and the other coming in. The more we can manage to get nature to do the work without our help, the better will be our success. Information based on a combination of efficiency and simplicity is still a desideratum, and further discussion by our readers will be welcomed.

To get a more definite idea of the problem of ventilation, it may be well to examine for a little the process of respira-When a volume of air is taken into the lungs and the oxygen taken out of it, carbonic acid of about the same volume is breathed out. This gas is one and a half times heavier than common air and when cooled after coming out of the lungs, it naturally falls to the lowest possible level. This gas is food for plants, but poison to all animals. When a Frenchman wants to kill himself easily, he lights his charcoal stove and closes all crevices in the room by which air can easily enter, and in a short time the stove helps his lungs to use up all the oxygen in the room and fill it with carbonic acid gas that soon makes him insensible and ends his life. In the same way our own leaky stoves let out the same gas and somebody is poisoned by it in their sleep. Therefore, if there is no opening at the very ground by which this can get out of a stable, the lowest few inches of the air becomes very poisonous, and the men who put in an upright ventilating shaft, with one opening near the ground and another at the ceiling are just trying to draw up this heavy air and send it out-

The inside height of a stone basement is of some importance. When we had straw roofs it was of less importance, as the natural ventilation was good—some-times too much so. In broad barns, with side wings, I have seen calves do well with a side at 6 feet or so, and the main building say 10 feet. Now that we build

in a barn in this very district where at one end the height was only 7 feet. may do for calves. The ground sloped and at the other end the horse stable was perhaps $9\frac{1}{2}$ feet. The window openings in a thick stone wall had to be almost at the ceiling, and were rather under 1x2 feet. This building is quite new, and before I spoke the owner expressed his regret at the blunder he had made. The light is obscure, except in very bright days, and he will deepen the openings to 2x2. He has too few windows altosav gether, and I quote his example that you may avoid it. For stock always in the house 10 feet is little enough. Stick an oak fence pole across at the bottom to protect the glass. One or two such cross bars are not much in the way of light.

Both Sides of Dehorning.

Most of us are familiar with the arguments in favor of dehorning as a safe-guard, and help to feeding. But Governor Hoard has always fought against it on the ground that it decreases the virility of the bull, and can be done as well without. And here in Manitoba, the other thoroughly reliable cattle buyer day. stated his conviction that the range steers that had been dehorned had, rule, a duller and more discouraged look than those with horns, and, in his opinion, did not make as good profit in beef. This may be contrary to general opinion, but the following report from a Kansas Agricultural Station goes a good way in the same direction. This buyer says, too, that he thinks the shears more mischievous to the heartiness of the animal than the saw. We commend his opinion to the consideration of feeders. The Kansas reporter says :-

In our steer-feeding experiments, several weeks before the experiment proper begins the steers are given a preliminary feeding and are weighed at frequent intervals so as to study their individual charreteristics and make-ups to enable a division of the number into comparatively equal lots in these respects. It was during such a period that the following data vere obtained. It is incidental, however and not part of the plan of the experiment proper.

Of the 15 steers that were purchased the fall of 1896 for experimental purposes. 10 head had been dehorned while year-lings, but the other five had horns. These steers were natives, raised near Manhattan, and were about 2 years 9 months old at time of purchase. They averaged 944 pounds, and were in fair flesh, coming direct from the summer pasture, where they had had no grain as yet. The cattle under consideration were to be put, after a time, on full feed into lots where corn and red and white Kaffir corn were to be compared as steer feeds. To make clear the methods of taking the weights given, the following explanation is necessary. The weights of steers are apt to vary greatly from day to day, so for all important periods in our work, three weights are taken on three consecutive days, and the averages of these for comparison. So in the majority of cases this is true. referring to the weighings, the date of second day's weight is given.

We intended to dehorn the five steers that had horns when purchased, and not commence the experiment proper until they had completely recovered from the operation. Since their purchase, the whole number were pastured together on the college tame-grass meadow, being driven back and forth each day, to the barn, for water and weighing. On October 8, 9 and 10 all were weighed, and on the 10th, more substantially, and cannot alter, this point should have more attention. I was after weighing, the five head were dehorn-

Swollen Neck

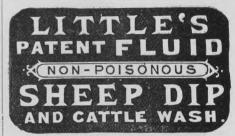
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ed. The work was done with the saw and | 9 to November 4, a comparison of weights by competent parties, who did a good shows a gain of 15 pounds per head for job, with no more struggle of the animal than is usual. All the steers were again turned into the meadow. The weather following was cool and showery at times. The newly dehorned steers were a little dumpish at first. They somewhat lost their appetites, but got over this in a few days, and their heads commenced healing at once. The first weights taken after de horning were on October 15, only one weighing being made in this instance. In comparing the average of the weights of this date, of the lately dehorned steers, with the average of October 9, a loss of 33 pounds per head is shown. Comparing the averages of the weights of the pre-

the lately dehorned steers, and a gain of 47 pounds per head for the previously dehorned steers, which cuts the difference in gain between the lots down to 32 pounds per head.

The above shows the lately dehorned steers gaining on the others; but the following shows that this gain ended Noveniber 4. Weights of December 8, compared with those of October 9, a period of 59 days, gives a gain of 116 pounds per head for the lately dehorned lot and 150 pounds per head for the others, or a difference of 34 pounds. Comparing the weights of November 4 with those of December 8, we find an average gain of the averages of the weights of the previously dehorned steers, for the same period, a gain of 36 pounds per head is shown. Summed up, from October 10, the day of dehorning, to October 15, the

take of dehorning after the steers have been on full feed for a time; a case came to my notice last winter where a bunch steers were dehorned after being on full feed six weeks. After it was done the feeder realized his mistake. I estimate that his check in gains cost him fully \$5 per head. Although dehorning is generally a good thing, much loss has been sustained by doing it both at improper times and by using poor methods. It is best done by destroying the buttons on the calf.

The above is given mainly to draw out fuller testimony from those who may know the ground and differ from the views of this cattle buyer and the Kansas

reporter.

For the other side, the Whitewood Herald gives strong testimony in favor of dehorning. Joseph Cope had a beast get loose last winter, and the havoc he



Shorthorn Bull, Hillary (18,071), owned by Hon. Thos. Greenway, Crystal City, Man.

pounds in favor of the previously de-horned steers. On October 15 all the steers were put on a light grain ration, to be increased gradually.

The next weights we use for compari-

son are those of October 23. From October 9, the date before dehorning, to the above date—14 days—we get the follow-The lately dehorned steers still weighed 10 pounds per head less than they did on October 9, and the others had gained 41 pounds per head, a difference of 51 pounds per head in the weights of the lots on these two dates. By this time, the steers' heads were pretty well healed, and they were eating regularly. Weights for the beginning of the experiment proper, were taken on November 2, 4 and 5. The sores from dehorning were practically all healed, and the steers in

dehorning had caused a difference of 69 Figuring this at 3½ cents per pound, the price paid for the steers, the shrinkage cost \$1.12 per head. This was on steers taken from the grass, and not steers that were on a full feed of grain.

There is quite a difference of opinion among feeders as to the advantage of having steers dehorned for the feed lot. By inquiring of a large number of feeders, I find that a few would just about as soon have native steers with horns as dehorned, for the feed lot, but the majority will pay a premium for dehorned steers. The premium ranges from \$1 a head to among the parties interviewed. the steers with horns are purchased in the fall they are intended for the feed lot, some few dehorn before feeding, but it hard to find a person that has practiced this once who repeats it. The general opinion is, if the horns are left until the their normal condition; all were on a full cattle are ready for the feed lot, they had better remain. This applies to native cattle. A few people make the serious mis-

wrought was more cruel and costly than years of dehorning. To avoid the possibility of repetition, 17 head, including the bull, were dehorned by clipping for \$1,25. This was done just before last Christmas. Among them were his milch cows. An unbeliever told him his cows would assuredly slip their calves, but nothing of the kind happened. Mr. Cope says the comfort of having a dehorned herd is great. Everybody knows the performance that goes on in watering a loose herd of horned stock. Who hasn't seen the bullies of the herd hooking and horning everything out of the way, perhaps neither drinking themselves or allowing others to drink? With a dehorned herd all is peace, and the heads are jammed into the tub or trough as close as herrings in a barrel. Again, in tying up everybody knows the care that has to be taken. With a dehorned herd all can be driven into the cow-house together, and left there to be tied up at leisure.

After having had a valuable mare gored to death, Mr. Limoges also dehorned in summer, and he states that they did not shrink in their milk.

How My Colt was Trained.

The old carriage horse was breaking down and another must take his place. The following is a chronicle of the daily performance of a green colt.—

July 12-Took up from pasture a half-blood German coach filly, three years old. Had been broken to the halter from the first, but nothing Walked her behind a self-binder at work; took her up to the line where the laundry was blowing about in the wind; found an old piece of sheet iron and tumbled it about on the ground and over a stone pile while she had pretty free play of the halter; opened and closed an umbrella before and behind; tumbled it about upon the ground and against her, and made her carry it open and upon her head with her ears among the braces. End of first lesson; time about one hour; took to stable; carefully groomed her and fed a few oats from the hand.

July 13-Repeated much of previous lesson, but in full harness. Then stepping behind, but with the lines not in the turrets, in case of a sudden whirl, waited for her to go in any direction. Did not tell her to go, but kept behind her whenever she tried to come to me. Finally started up the road. Of course stopped and started as she pleased, and turned completely around on meeting a horse and carriage and tried to follow. Then made her feel the line for the first time and turned her to one side. Found ourselves in a plowed field and wandered about for a considerable time, she showing some resistance to being guided by the line, but no inclination to bolt or to throw herself. Finally got her into the road, and in the return succeeded in inducing her to mind the line whenever it seemed a matter of indifference to her as to where she should go. Did not attempt to strongly oppose her. End of second lesson; time about one hour. Distance about a mile. Unharnessed outside the stall without tying, having left the halter on. Groomed, and fed oats from the hand.

July 14—Repeated lesson of day before, only used more force as she learned the line, and kept her from turning out of the road. Had a few oats in the pocket and occasionaly fed from the hand. Soon she minded the line perfectly unless strongly desiring to go in some other direction. This was in no case allowed on this day, but she was kept in the middle of the road.

July 15—Drove in harness with one line only free from the turret; made her drag chunks of wood and old sheet iron. Found a pile of ashes which she refused to approach. Tried to turn around, but she always found herself facing the ashes. After three or four attempts to get away she walked boldly over the pile. On this day succeeded in teaching her to go forward by the word, and commenced to stop her by word and line. Unharnessed her by the roadside and sat a considerable time grazing her. Got her into a deep ditch and led her the length of it. I had always unharnessed her in hall of barn without tying, and here I unharnessed her in same way.

July 16—Evening. Drove about a mile to a small river and put her over a bridge for the first time. A little afraid of it, but easily went over after a little study. In no case was she led over or past an object that she feared, but rather held still till she studied it out and was willing to proceed. Then circumstances compelled a cessation of training for several days during which she stood in the barn on an earth floor.

July 22—Drove again and taught her to stop when told, but not yet to stand till told to go, for that is one of the hardest things for a horse to learn. In driving up and down the road she was strongly determined to turn into the barn at each passing of the gate, but this

she was not allowed to do, but was put back, and forth past the home gate until she gave up all notion of entering without the sign from the line. To clinch it all, at last she was pulled in and started for the barn, then suddenly turned back into the road again. She never but twice afterward refused to mind the line instantly, and then only for a moment.

July 23—At this lesson she was taught not to stop until told to do so and was made to feel a touch of the whip. She has never been struck with the whip up to the date of writing, but knows perfectly well what it is for.

July 24—Got out the breaking cart for the first time. Let her look it over, and eat oats off the seat. Led her into the shafts wrong end ahead and let her eat more oats off the seat. Raised the shafts and dropped them beside her, making all the noise possible. Pushed the shafts against her with considerable force, put them on her back and between her legs, then pulled the cart against her both in front and behind. Put her in and out of the shafts repeatedly, and in this way spent a half hour. At last pulled it beside her for some distance, jamming the shafts against her sides; hitched her in with help of an attendant, and started off; drove about half a mile and returned.

July 25—Repeated last lesson, with less preliminary and more driving. In all cases avoided seeming to hold her, but was always in reach of a line and stopped her instantly if she was about to move away.

August 2-Nothing done since last date. Loaded her in freight car at Woodland, Mich., to ship to Illinois, a distance of 300 miles. Took every precaution at her first sight of the cars, and tied her in the cars in such a way that she was able to see from the side door. Exhibited fear when the car started, becoming wet with perspiration. Reassured her by patting the neck and head and by gentle words, and soon succeeded in attracting her attention to me, which was the object, until she could ride contentedly with her eyes hidden by tucking her head under my arm. She was to make a family horse if she had the quality, and nothing was too troublesome in her education. After five or six miles she quieted down and showed very little fear when a train passed upon the next track, but was much disturbed if I left the car, and would call upon me constantly. knew then that I had succeeded in fixing her mind strongly upon myself, and knew that the principal work in her education was over.

August 3-Spent considerable time in freight yards, and she saw much of engines and passing trains. Unhitched her and led her to the open door at the side to see what was going on, both as we were standing and when under motion. She tried to put her nose on a locomotive that had stopped just by us on the next track, and called to it as it moved off. Stood at the door as fast trains passed, and we rode many miles that way through cuts and over embankments and bridges. A small book and several newspapers were torn up and the pieces left flying about the car for half a day. course they frightened her at first until I fed her oats from one hand and with the other held half a newspaper fluttering in the breeze, and allowed it to whip her about the body and the head. She would endure the paper for the sake of the oats, and in a few minutes would eat contentedly while thrashed over the head and eyes with papers in both hands. With this day everything like fear or timidity seemed to disappear and with one exception has never developed since.

August 14—After arriving at her destination circumstances prevented resuming her education until over a week had passed. She was now hitched to a cart and driven to the city, a distance of two miles by the route chosen. It was a hot day and she was given a rest by the track when trains were passing, and taught to stand without being held and to stand still by constant rubbing over all parts of the body with a wisp of grass. This gave her something to enjoy and prevented the forming of the disagreeable habit of restlessness when standing. We drove her close to the track to face passing trains, that she might learn to know them from the ground; let her see street cars for

the first time and put her down alleys and about mills and factories. Showed a little hesitation about crossing some shadows cast by escaping steam. Let her stand and study them and in a moment she went over, but was not allowed to hurry, either then or after. At one time showed determination to go ahead upon a certain street rather than down a side alley. She was held to the spot until she gave up to the rein. We had found all the worst places in town and returned. Time, three hours.

August 16-Repeated the lesson of Saturday, but in a few minutes overhauled a traction engine, drawing a separator and a water tank. Drove behind it all for a quarter of a mile, then pulled out and drove beside it, gradually gaining until she walked beside the engine, and close enough so that the escaping steam drove out among her legs. Drove this way a quarter of a mile. Gave a good deal of practice in turning to right or to left, round and round, and in backing until she minded the rein perfectly. Returned to the barn and hitched immediately, and for the first time, to a fourwheeled rig. After getting a little accustomed to this, returned to the stable. This was the first that she had been driven off the walk, which was just before changing from cart to huggy

August 17—Hitched immediately to the buggy and drove to town. Did not allow her to start for some minutes after hitching up. Gave some practice in suddenly stopping and standing still until told to go. She showed fear of an iron cover to a manhole of a sewer at the side of one of the streets. Stopped her by it, but she would not step over it. We drove her by it time and again until she would pass by it without shying, but did not get her upon it until a later drive.

August 18-Very leisurely hitched to the buggy and stood a long time after getting in before starting. Then started in the slow walk. Never allowed her to start upon the trot. After some driving about returned to a house near the barns to take in a couple of ladies. Expected that she would want to go to the barn, and for that reason did not immediately go for the ladies. When she found that she was not to go to the barn she took a fit of the sulks. Was determined to take the drive leading to the barn. We were as determined to go the, other way. There had always been two of us, and we now fully expected the tussle that is always likely to come some time during breaking. Her head was pulled in the direction that we desired to go and held there. She was unable to go her way, and reared a little. It was a case of her stubbornness against ours, and in about two or three minutes she gave up to superior intelligence and marched off our way. If she had not we would have been right there until the next day. We then drove her about the drives around the barns, to and from, for quite a time; then took in the ladies and the four had a fine drive. In now writing up these notes, I may say that this was the last time she showed any sign of stubbornness, and her training since that time has been simply continuance of her education.

In two or three days longer she was driven by my wife, or, in other words, inside of a week after her first attachment to a four-wheeled vehicle; and I consider her now at this writing (September 4) perfectly trained, as far as safety is concerned. She stands perfectly still while being harnessed and hitched to the buggy, does not think of moving off until told to go; does not take a trot until told to do so; stops instantly at the words and stands perfectly still until told to go; can be driven into a place big enough to let her through in darkness or in light, and seems to be afraid of nothing.



This little write-up of my notes is given, not to contribute to the stock of knowledge on horse training, but in the hope that some young man who has not yet had experience may read it and be convinced that there is no secret in dealing with horses except to study their nature and to realize that we are dealing with intelligence; that the animal is by nature somewhat timid, a little inclined to be stubborn when opposed, as we ourselves are, but that gentle persistence will accomplish everything; and that we are to conquer, not by superior force, which we do not possess, but by superior intelligence, by which we can train and educate without arousing either stubbornness or fear.—Farmer's Voice.

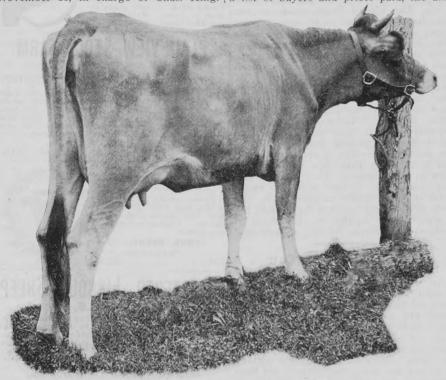
Stock Shipments.

A car of stock from Ontario, shipped under the new arrangement started on

(Shorthorn); Mossom Boyd, Bobcaygeon, to Mossom Boyd Co., Prince Albert, Alta., bull (Hereford); bred by D. Smith, Compton, Que., W. Butler & Sons, Dereham Centre, to Kipp & Knight, Chilliwack, B. C., bull (Guernsey.)

Sale of Thoroughbred Horses.

On November 17, one of the most important sales of thoroughbred horses ever held in Manitoba took place at Carberry, when a number of fine animals, the property of the Boyd Ranching Co., were knocked down to the highest bidder. Glenboro and Portage la Prairie districts were well represented. The farmers of the Carberry plains were also present in goodly numbers. It was announced that the sale would be an annual affair, at which a number of the promising young stock bred by this company, as well as brood mares, would be offered. Below is November 11, in charge of Chas. King. a list of buyers and prices paid, the ani-



Jersey Cow, owned by Geo. Smith & Son, Grimsby, Ont.

Exhibited at Brandon and Winnipeg, 1897.

Some of them are of exceptional quality. | mals having fallen into the hands of good, The car contained the following animals. J. M. Gardhouse, Highfield, to D. Sinclair, Portage la Prairie, Man., 1 yearling ram (Leicester); Wm. Linton, Aurora, to F. W. Brown, Portage la Prairie, Man., 4 ewe lambs, 4 yearling ewes, and 1 yearling ram (Cotswolds); J. & W. Watt, 4 ewe lambs, 4 yearling ewes, and 1 yearling ram (Cotswolds); J. & W. Watt, Salem, to J. R. Sanderson, Minnedosa, Man., 1 yearling bull (Shorthorn); Thos. Teasdale, Concord, to F. W. Brown, Portage la Prairie, Man., 1 boar (Berkshire); Wm. Linton, Aurora, to Wm. Linton, Jr., Elkhorn, Man., 1 mare (Hackney); Jas. Russell, Richmond Hill, to G. Allison. Elkhorn, Man., 3 heifers (Short-High-field to G. Jas. Russell, Richmond Hill, to G. Allison, Elkhorn, Man., 3 heifers (Shorthorn); J. M. Gardhouse, Highfield, to G. Allison, Elkhorn, Man., 1 yearling ram and 1 ram lamb (Leicesters); William Grainger & Son, Londesboro', to T. T. Skinner, Indian Head, Assa., 1 yearling bull (Shorthorn); James Russell, Richmond Hill, to Wm. Stothers, Maple, Creek, Alta., bull (Shorthorn); R. Marsh, Richmond Hill, to Wm. Stothers, Maple Richmond Hill, to Wm. Stothers, Maple Creek, Alta., bull, cow and heifer (Shorthorns); John Gardhouse, Highfield, to Wm. Stothers, Maple Creek, Alta., heifer breeding.

capable men :-

J. G. Rutherford, M.P., Portage la Pra-irie, Wapella, \$140; Wm. Lyle, Glenboro, Westwind, \$65; H. Wilton, Glenboro, Winota, \$145; Sam Williams, Carberry, Winota, \$145; Sam Williams, Carberry, Stella, \$75; Jas. Whaley, Carberry, Kasseiar, \$300; G. Block, Wellwood, Susanella, \$105; G. Anderson, Glenboro, Chinook II, \$150; Wm. Walker, Carberry, Nelly W., \$100; Wm. Goggin, Carberry, King Kalmar, \$500; J. Barber, Carberry, Hazeldean, \$140; H. Wilton, Glenboro, Dusk, \$80; J. Fowler, Carberry, Hudson Bay, private sale; W. Swenerton, V. S., Carberry, Alice Withers, \$100; R. I. M. Power, Marshmead, Willibena, \$175; B. Ford, Carberry, Jay Bird, 30; H. E. Waller, Carberry, Experience, Flossietta, Wathen, \$445. Wathen, \$445.

Wm. Watson, one of the very best judges and feeders of cattle in our time, recently died in Illinois, where he had the charge of a fine herd of cattle. He was the son of Hugh Watson, of Kieller, the great pioneer of Polled Angus stock

Influencing the Sex.

A capable breeder thus discusses the question :- Many theories have been advocated as to how male or female offspring may be produced, and yet, after all, there is no theory in the matter, but a very simple law of nature. Given a bull and a cow of like ages and strength and constitution, and the produce of these may be of either sex. But let the bull be old or weak or out of condition, and the calf will, almost without exception, be a male: and this is merely the law of nature trying to reproduce itself, because, of the two arimals, the bull shows evidence of being the one most likely to die first, and therefore the male calf would be the one required to carry on the breed. In short, the offspring produced is of the same sex, as a rule, as the weaker of the two parents. This, I know, is quite contrary to the most general theory; but I have taken the trouble to study and prove it during the past six and thirty years, and I have found that it is invariably the case, not only as regards cattle, but also in the case of sheep, horses, and even human beings. When our colonies were first settled, and quantity rather than quality of stock was the one thing desired, young strong rams were put to old broken-mouthed ewes, with the result that ewe lambs were produced in numbers as eighty is to twenty. But when the country had become fully stocked up, and heavily fleeced wethers were wanted, old rams were put to two-yearold ewes, and the result was that about three parts of the lambs were males. I know that what I have written will be contradicted by many, but I have proved it correct during thirty-six years of a farming life, at home and abroad, and I place reliance on the rule from the few exceptions I have been able to corroborate. Dr. Brooks, of the Hopkins University in America, has come to the same conclusion as this one which I have preached for many years back, and he says that "Whenever we are surrounded with a favorable environment there is a tendency to an excess of females; unfavorable circumstances, on the other hand, tend to an excess of males." Now, by this he means that, so long as a man has a good income, and can live well, the female part of the population will go on increasing more rapidly than the male. What is the reason that so many savage nations have been civilized off the face of the earth? Because bad whisky and worse rum have so wrecked the constitu-tion of the males that all their progeny are of the male sex, and so in time the females gradually die off, and the males have only the poor satisfaction of following suit. Let any one take the trouble to note what I have written, and I think he will become a convert to what I have proved beyond a theory.

New Zealand last year shipped between five and a half and six million carcases of mutton to England.

The London (Eng.) Times says :- How greatly the times have altered is shown by the circumstance that last week witnessed the inauguration of the export of fresh meat (frozen) from London to the Cape, the steamship Nineveh having taken on board 1,600 quarters of Bowen (Queensland) beef, and 2,000 carcases of River Plate mutton, for conveyance to Cape Town. The most noteworthy feature of this transaction is that the meat ture of this transaction is that the meat could be purchased in England at a much lower rate than in the countries of production. Beef at 2½d. per lb. and mutton at 2½d. per lb. free-on-board could not be supplied in the Colonies, but was procured at home.

Relative Values of Feed.

Now that feed is very high-priced and corn being introduced, the following notes by Professor Harry Snyder, of Minne-sota Experiment Station, will be of in-

He says :-

"When corn is 28 cents and oats 18 cents a bushel, which is the cheaper and better for feeding purposes, or will it pay to exchange both of the grains for shorts or bran at \$8 per ton? Many farmers are probably considering questions of this nature at the present time, and in order to answer it, it is first necessary to know what is in each of the foods, and how much the animal to which the food is fed is capable of getting out of it. The most important nutrient of the food is protein. The fat and carbohydrates are also important nutrients, as they produce heat when digested. As a general rule, the foods which yield the largest amount of protein, and other nutrients, for a given sum of money, are the cheapest and best

for feeding purposes.
"In a dollar's worth of 18-cent oats there are 16½ pounds of digestible protein, 7 pounds of digestible fat, and 138 pounds of carbohydrates. In a dollar's worth of 18-cent corn there are 19 pounds of digestible protein, 61 pounds of fat and 138 pounds of carbohydrates. In the dollars worth of corn there is a little more protein than in the dollar's worth of oats. For many purposes it would be best to give the preference to the oats. results would probably be obtained by feeding a mixture of two-thirds corn and one third oats. With a good supply of rough fodder, it would not pay to go to any great expense to exchange the corn the oats. When bran or shorts are for selling at \$9 per ton, it would pay to sell part of the corn or oats, and feed bran or shorts. In a dollar's worth of bran at \$9 per ton, there are 25 pounds of protein and 145 pounds of fat and carbohydrates, against 16 and 19 pounds of digestible protein in the dollar's worth of corn and

"In order to compare the amount of nutrients in grains at different prices, the following table has been prepared, which gives the pounds of digestible protein, fat, carbohydrates and heat units in a dollar's worth of the material when the grains are at the prices stated. One dollar's worth

of food contains :

01 1000 00	IIICCIANO .			
	Price per bus. or ton.	Pro- tein.	Fat.	Carbo- hydrates
Oats	\$0.20	15	6	82
Oats	18	$16\frac{1}{2}$	7	91
Corn	30	19	6	127
Corn	28	19	$6\frac{1}{2}$	138
Corn	25	$20\frac{1}{2}$	7	-153
Rye	45	13	2	12
Bran	8.00	31	9	105
Bran	10.00	25	9	84
Shorts	8.00	25	6	139
Shorts	10.00	20	41	112
Oil meal	20.00	28	6	37
Oil meal	22.00	$25\frac{1}{2}$	$5\frac{1}{2}$	33

H. Gilchrist, of the firm of Gilchrist & Munro, cattle exporters, Montreal, paid Manitoba a visit last month. He stated that prices received for stock in the old country this season were not altogether satisfactory. He attributes the low price to the large shipments from the United States, South America and Canada.

Dr. F. F. Wesbrook, formerly of Winnipeg, now of the Minnesota State Board of Health, been called on to investigate an outbreak of verminous bronchitis, which has appeared in a dairy herd in Mower county. He reports that 23 cows have died and that several more show symptoms of the disease, which is commonly known as lump jaw.

Range Stock in 1807

Speaking of the Northwest cattle trade this year, Mr. Robert Ironsides, of Montreal, who handles most of the cattle from Manitoba and the Northwest, said: "The cattle turned out bad, as they have for the past two seasons. For several reasons, notably the flies, rain and long grass, they failed to fatten up well, but I may also mention the fact that a great many of the farmers are to blame for the careless manner in which they finished the stock.
During the year there was an enormous number of cattle raised in the Northwest, and there would have been a very serious glut if many thousands had not been taken across the line for feeding purposes. In fact, if this outlet had been closed, I believe that cattle in Montreal would have sold at a cent a pound, and the very same stock, too, that they are now getting $2\frac{1}{2}$ to 3 cents for. The shipments to the other side of the water turned out bad, and many of the consignments show losses. The United States stock, on the other hand, was found to be in very good shape, and the result is that the Canadians, owing to nothing else than the inferior quality, have been selling anywhere from ½d, to 1d. a pound under the Americans." Mr. Ironsides was asked if the Mr. Ironsides was asked if he thought the unsatisfactory results of the year's business would likely have a tendency to restrict raising in the future. "No," he said. "The farmers have found out that they can raise and sell cattle to the States for feeding purposes, and at the states for feeding purposes, and at the same time realize a very fair profit, and it is likely that they will all keep right in the business. They might," said Mr. Ironsides, "if they took the pains, fir ish off their cattle in good style, and there is no doubt but that they would net a price in the English market equal to anything men across the line are getting."

Feeding Mare and Colt.

An experiment tried by an English breeder was in this way:—Three mares were fed heavily, and the colts fed noththing but grass. The mares got three times each day a plentiful ration of oats, bran, cut hay, and sometimes roots moist-ened and fed warm two out of three times per diem. Three other mares got nothing at all but the grass they picked, but their colts were fed as described in the preceding paragraph. Four of the best mares were fed about half as much as the first three, and their colts were given just the same feed as those in the second lot; and two mares and their colts were run together in a field by themselves getting no other food of any kind. All drank from the same pure spring water supply. When it came time to compare results in the fall, the two colts which got no feed themselves, and whose dams got no feed, were the poorest in point of growth and condition. The four that were fed, and whose dams were fed, were quite a bit the best, and the colts that were fed, and whose mothers were not, were better than the colts that were not, d,but whose dams were given grain three times per day. That teaches that it is best to feed both the mares and the colts something extra in summer. The extra feed given the mare makes the milk more nutritious and plentiful.

Dr. K. J. O'Doherty, a Brisbane man, has patented a new process for chilling meat. It is called deoxidation of the atmosphere.

Hog cholera kills a million dollars worth of hogs on Minnesota alone every The loss in Iowa is proportionately year. greater, as there are more swine there.

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Farmers and others having choice Malting Barley for sale would do well to send us samples. We are prepared to pay highest cash price for good quality.

Edward L. Drewry, WINNIPEG.

Band, Herd and Flock.

G. P. Loree, of Roland, has imported a pure bred Lincoln ram, bred by Parkinson & Duffield, of Guelph.

The surplus at the last Royal Show at Manchester, Eng., has been found close on \$25,000. This has been twice excelled at Manchester in 1869, and York in 1883.

Friends of Mr. S. A. Bedford, Brandon, will be delighted to learn that his cattle have just been tested for tuberculosis by Dr. Cox, V. S., and all have come out sound. This is the only test made since 1893.

R. McKenzie, High Bluff, Man., informs us that there has been a brisk demand for Berkshires this season, he having disposed of all the stock for sale at present.

Orson D. Munn, owner of the Dutch belted cattle shown in our last issue, informs us that he has just been awarded 30 cash prizes for these cattle at three fairs held in the States of New York and New Jersey.

W. J. Helliwell, Oak Lake, desires correction on list of awards at that show as follows:—R. L. Lang had 1st on both bull and heifer calves, Helliwell 2d. Our last month's report erroneously gave Mr. Lang 2nd place.

J. T. Hutchinson, Hayfield, Man., writes us as follows:—"There has been a good demand for Holstein-Friesian cattle this fall. Cattle have gone into winter quarters in grand shape, on account of the fine open fall."

John S. Moffitt, Pilot Mound, has sold his fine 2-year-old Shorthorn bull, Napoleon (23403), to John Pack, of Carnduff, Assa. The enterprise of Mr. Pack in thus bringing so valuable an animal into his neighborhood will no doubt be appreciated by his fellow farmers.

At a recent meeting of the American Clydesdale Association it was proposed to amalgamate with the Canadian Association so as to save the expenses incident to two separate organizations. The object is desirable, but in practice it would just mean to carry the whole thing to Chicago.

J. Polwarth, who, as noted in last month's Farmer, sold his farm near Carberry, has since sold his stock and implements. The high class and number of the stock attracted a large number of farmers. The bidding was keen and spirited, most of the lots going for good figures. The sale realized \$2,500. As usual in such sales on the Big Plain, nearly every article sold was for cash.

Wm. Chalmers, Hayfield, Man.,breeder of Shorthorns,reports the following sales: "To James Moore, Beresford, one heifer, Minnie Barmpton; Thos. Hyndman, Brandon, two heifers, one sired by Prince Charles of Beresford, the other by Hayfield Hero; one bull (sired by Beresford Champion), to John Sharp, Nesbit; one bull each to James Moore,Beresford; Wm. Evans,Brandon; Mrs. Lake, Nesbit. The last three are by Aberdeen II., and are good ones, being extra feeders."

Geo. Lane, a Shorthorn breeder from the Calgary district, while in Winnipeg lately, expressed the opinion that the large number of stockers taken out of Manitoba and the Territories by American dealers this year would seriously affect the cattle situation next year. American dealers bought up Ontario stock one season in the same manner, and the result was severely felt ame years afterwards. Chicago and other markets will be over-stocked nex and it with fat cattle, prices.

At Beaconsfield, Man., the other day the flock of sheep owned by W. T. Lytle started for a patch of turnips half a mile away, and on the road were tackled by a wolf that worried at one of them. A neighbor's wife saw the occurrence, and, no man being near, her twelve-year-old daughter, Jennie, saddled their horse, and with her dogs started to the rescue. The dogs were getting rather the worst of the encounter, but Jennie dismounted, and picking up a willow stake, put in a hearty blow when she got a chance. The result was that Jennie rode home with the wolf as a trophy of her courage and promptitude.

Andrew Graham, of the Forest Home Farm, reports his stock as going into winter quarters in fine condition. Missie Morton, the 3rd prize cow at Winnipeg, recently gave birth to a pair of twin calves. Unfortunately one of them was dead on arrival. 41st Duchess of Gloster, the dark red cow that was in the herd at the Industrial, will be due to calve in a short time. Mr. Graham also reports an active demand for Plymouth Rock cockerels, among others, quite a number of orders from the Territories. He still has a number of bull calves and young Yorkshire sows for sale. See advt.

The Department of State has been informed by the United States consul, M. M. Duffie, at Winnipeg, that there has appeared among cattle in that section a disease known as "actinomycosis," commonly called "lump jaw," which has been placed on the list of infectious or contagious diseases by the Department of Agriculture of Manitoba. He further states that large numbers of poor, cheap cattle are being shipped to the United States for grazing purposes, and advises cattlemen, on the frontier, to look out for the disease, and that the importation of cattle be immediately stopped. Mr. Duffie is evidently not an authority on cattle. The cattle bought to go south are not poor or cheap, and are not wanted for grazing in November.

John Traquair, Welwyn, Assa., writes: "The show cows, Belle and Belle's Regina, dropped heifer calves last week, sired by the silver medal bull, Athelstane, the best bull I ever had, which has improved a great deal since the Winnipeg Fair. I have disposed of the bull calf, Ian Dhu, to John Dafoe, Calgary, who tells me that the "Doddies" are in great favor out there. Oats, barley and of course oat straw and hay are scarce around here, and as a result we may have some thin cattle in the spring. But as a set-off we had a good crop of wheat and are getting good prices, so that we are all fairly happy. I think your November number splendid; in fact, it was just as good as going to the fall fairs to read it and look over the illustrations."

Practically all of the outgoing room for the transportation of cattle on the regular transatlantic lines has been cornered by a syndicate composed of English cattle buyers and P. D. Armour, of Chicago. Contracts have been placed with the White Star line by the syndicate for one year for all of the company's cattle room. contracts have been made with the Atlantic Transport line, of New York, Philadelphia, and Baltimore for the length of time, and with the National line for two years. The only lines not contracted for by the syndicate are the Wilson line to Hull and the Allan line to Glasgow. The prices at which the contracts were made provide for the carrying of cattle at 40 shillings a head, not including at this rate any insurance or fodder. The cornering of the cattle trade has led to negotiations for a new line of steam-

ers to run between New York and London.

Jos. Lawrence & Sons, Clearwater, Man., write us as follows:—" We beg to announce in this issue of The Farmer that we are offering some of young stock, the quality of which is wellknown. We claim we have not only the best herd in Manitoba, but the best in We are selling our stock bull, Canada. Indian Warrior, to prevent inbreeding, and to make room for Nominee, which we have purchased from Capt. T. E. we have purchased from Capt. T. E. Robson, Ilderton, Ont. This bull captured the silver medal at Toronto and Ottawa this fall. Indian Warrior took the sweepstakes at the World's Fair and at Regina, and as a stock getter was never beaten in the show ring. He took first this year and in 1896 at Winnipeg for him-self and two his get. We exhibited three heifers this year of his get and they took first in their classes at all the sum-mer shows. The herd of grade cattle that took first this year at Winning were his

The sale of 50 head of attle that belonged to the late Hamilton Upjohn, who lost his life in the prairie fire at Lake Frances, took place at Reaburn on Nov. 11, and furnished one more evidence of the value of good blood. The Upjohn family bought a Shorthorn bull from the Puxley herd at Westbourne, and afterwards from Walter Lynch, Red Hero, by Village Hero, the 2nd prize winner at Winnipeg. The quality of the young stock gave ample evidence of the profit to be got from good breeding. Calves sold for more than was paid last spring for yearlings, and cows from \$33 downwards. In spite of the untoward experiences of the previous six weeks, all the young stock looked thrifty and full of promise, and presented a valuable object lesson to every one interested in cattle breeding. Good blood pays, and it is to be hoped that Red Hero, the stock bull, will get well over the injuries he suffered from the fire. He is the right sort, and no mistake.

F. W. Brown, Portage la Prairie, writes The Farmer as follows:—"Since writing you last, I have sold a young Shorthorn 11 calf, dam Gaiety 5th, 1st prize heifer Winnipeg in 1896, sire Lyndhurst 3rd (22995), 1st prize winner at Winnipeg and Portage la Prairie this year as one-year-old, to Jas. Gardiner, Cypress River. Mr. Gardiner, while here, secured an extra fine pair of my young Berkshires. Besides the above. I have sold boars to the folthe above, I have sold boars to the rollowing:—Wm. Blair, Ochre River; Chas. W. Peterson, Craighurst Farm, Calgary; A. W. Playfair, Baldur; two good grade age Plains for cross-breeding. Sows as follows:—Bonny Queen, the famous prize-winning sow, to Jas. McEwen, Bridge Creek; one to E. E. Snider; J. W. Brown, Portage, and J. M. Tait, Headingly. This is the last I have out of six spring litters, all of which realized good prices. On the car of thoroughbred stock which reached Portage la Prairie on November 18, in charge of Mr. King, I received a young Berkshire boar of extra good quality, bred by Thos. Tesdale, Concord, Ont., the well-known breeder who won so many prizes during the last two years at Toronto. Also nine wold sheep, bred by Wm. Linton. Also nine Cotsstock all came in this fall in good condition, I think the best I ever had them, and they will no doubt do well, having more room. My horses and cattle are all in the new stable which I have just finished, 40x70. In the lower story I can house nearly 50 head, while upstairs there is a granary that will hold 1,700 bushels oats and barley, the balance being filled with over 80 tons of hay."



Answers to Questions.

By Fred. Torrance, B.A., D.V.S., Winnipeg

As it is desired to make this column as interesting and valuable as possible to subscribers advice is given in it free in answer to questions on veternary matters. Enquiries must in all cases be accompanied by the name and address of the subscriber, but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.50. All enquiries must be plainly written, and symptoms clearly but briefly set forth

"Subscriber," Wolseley, Assa.—"Please give cure for a cow with swelled udder that has been bleeding and running all When she calved, could get no summer. milk. We used a silver tube to draw the milk, we used a silver tube to draw the milk, she kept giving less every time, after three days that failed. We then used a syringe with warm water, but without success. The cow is not in bad condition. Udder is still bleeding and running."

Answer:-Procure from a druggist the following lotion:-Chloride of zinc, 3 ozs.; soft water, 40 ozs. Inject a little twice a day into the opening from which the matter is running. Be sure and force the lotion into every part of the fistula. If the other three quarters of the udder are healthy they should be milked regularly. and the milk will be fit to use. If the whole udder is hard and giving little or no milk you had better dry her up com-pletely. Bathe the udder frequently with hot water and then rub in a little camphorated oil.

W. S., Carman, writes:—Please answer in you next number how to shoe a trotting horse that hitches in the nigh hind leg and also cross-fires with the same foot, touching the off fore foot on the inside.

Answer.-You horse's defect in gait may arise from faulty conformation, and in that case shoeing is not likely to effect a cure. Find out, if possible, what part of the hind foot touches the front and have the shoe set back a little at that point. that the foot is perfectly level, and not higher on the outside than on the inside. The front shoes should be two or three ounces heavier than the hind. Protect the front leg with a boot when speeding and keep the head well checked up.

X. Y. Z., High River, Alta., writes:— "My 2-year-old bull has foreskin very much swollen and hanging out. Has been running with cows all season, till three weeks ago. Please state cause and treatment."

Answer.—The inflamed condition of the foreskin has been caused by some injury, foreskin has been caused by sand and may have happened through the example and may have happened through the example bull. The cessive ardour of a young bull. The parts should be bathed in a hot solution of tannic acid (one drachm to a pint of water) and the extended portion returned within the sheath. Do this two or three

ness. You do not say if the sow has ever produced young, and it may be a case of congenital sterility, caused by absence or defect of some of the organs of reproduc-Try the effect of exercise and feed that is nutritious, but not specially fattening, such as oat chop. It would also be wise to mate her with a different boar.

The Moose Jaw Times gives details of nearly \$70,000 worth of improvements made in that town and district during the last season, mostly by farmers.

Blyth Farmers Institute has here a concert, given by first-rate talent, to raise funds for the library in connection. President Thomson has given a handsome Blyth Farmers' Institute has held a donation of books to start with.

At West Lynne a large sheep shed has been put up at the N. P. R. station to accommodate 500 sheep, which have been purchased by the Elevator Co. The sheep will be fed on screenings, which can thus be turned to good account. the Minneapolis elevators many thousands of sheep are now yearly fed on screenings, and make the finest of mutton.

Graham Brothers, the well-known horsemen, of Claremont, Ont., have got into trouble over their famous Hackney, Royal Standard. Besides many honors won in Canada, he recently swept the championship at Chicago for Hackneys and coach horses. The Americans want all the trophies back that he has from them. The secretary of the exhibition exonerates Messrs. Graham, and explains that he, knowing that the horse was not in the American register, entered him. The condition of American registering was left in the prize list by mistake.

A Triumph Peculiar to Diamond Dyes.

Thousands of ladies in Canada now fully understand that dyes prepared for coloring wool goods cannot be used successfully for the coloring of cotton and niixed goods.

The manufacturers of Diamond Dyes have long ago overcome the difficulty, and now their special Cotton colors are

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within the sheath. Do this two or three times a day until cured.

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Manitoba Poultry Association.

The Manitoba Poultry Association are making preparations for their annual exhibition to be held early in the new year at Winnipeg. The executive have made some important alterations in the prize list, which will tend to make the show better, and increase the interest in first-

class stock in the west. During the past month a deputation waited on the Hon. Thos. Greenway, Minister of Agriculture and Immigration, from the Manitoba Poultry Association, consisting of Messrs. Chadwick, Black-hall and Stovel, as to securing the grant towards their annual exhibition, and incidentally discussed the advisability of the government making a grant towards securing portable coops, so that if the assofelt at any time it would be well to hold their show at some other point than Winnipeg, the cost of transportation would be very small. At present the coops required for the annual show would take several cars for transportation, and, therefore, cost more than the association feels warranted in spending towards holding the show at some other point than Winnipeg. Hon. Mr. Greenway did not feel disposed to promise assistance along that line at the next session, but suggested the advisability of the government making two grants, one for 1898 exhibition and one for 1899, so that the association would have a certainty in advance, and could make plans accordingly. This would be a great advantage, and we trust the government may see its way clear to carry out this suggestion.

Business Breeds.

An English poultry expert says :-

Anyone who has studied the nature and habits of fowls knows very well that what is food for one class of hens does not answer best with others. What is good treatment for the small, active fowls will give poor results when applied to the

big and more sluggish.

Hence the unprofitableness of keeping all sorts, conditions, and sizes of hens in one flock. My own idea is that the average farmer will best be served by two flocks of hens—one a small, great laying variety, and the other heavier fowls, good for meat as well as eggs. Such a combination will serve to furnish a continual supply of eggs the year round, and dress-ed poultry whenever it is desired upon the table. For the lighter breed my own preference would be the white or brown Leghorn, and for the heavier either the Wyandotte or the Plymouth Rock.

Keep the two varieties separate, feed the larger fowls more sparingly than the lighter birds, especially in the case of carbonaceous food, such as corn. A Plymouth Rock will take on fat very readily, and when fat will become less prolific in eggs, and more liable to disease.

More effort must be made to keep the winter. A Leghorn will scratch from morning till night, whether fat or not, and so can be fed more freely—can be "forced," as the saying is.

This idea of two breeds for the farm presupposes that the first desire is to supply the family table, both with eggs and be well padded.

poultry meat, marketing whatever surplus there may be. If poultry is to be made of greater importance in the farm's income, then the selecting of the fowls becomes a

matter of no little importance.

Of all the poultry "farms" now running probably 95 per cent. make use of either the white Leghorn or of the barred These are the two fav-Plymouth Rock. orite breeds for business, and of the two the most successful poultry farmers have selected the white Leghorn.

As a money-maker, pure and simple, I believe the Leghorn will surpass any other variety of fowl. They come to ma-turity very quickly. The cockerels can turity very quickly. be sold at a good price at two pounds weight for broilers, leaving the pullets to be pushed rapidly along to the laying per-They will ordinarily lay a couple of shillings' worth of eggs before pullets of the large varieties, hatched at the same time, begin to seek the nest. This is a big start on the credit side of the account.

As to winter laying, I have not found it at all difficult to secure eggs from Leghorns in the winter. House them warm-ly, give them plenty to do, and feed gen-

erously, and they will lay finely.

S. B. Blackhall, a Winnipeg fancier, had the misfortune to lose nearly his whole flock recently by two dogs entering his poultry house and killing them. Besides killing some very promising young birds, nearly all of his prize winners at the last poultry show were destroyed.

The National Fanciers' Association, of Chicago will hold their second annual show, January 24th to 29th, at the Second Regiment Armory Hall, on Michigan avenue, Chicago, Ill. The importance of this show is sufficient to secure excursion rates over the railroads, and anyone desirous of attending can arrange for cheap transportation by addressing the secretary, W. W. Hogle, 1015 Benson ave., Evan-ston, Ill. Elaborate preparations are being made and there is no doubt but what it will be the best show of the season in the central west.

There is nothing in the color of the yolk; that is, color does not indicate the quality. The proportion of coloring matter in an egg is very small, and the color of the yolk is deepened in proportion to the coloring matter of the food. In the summer, when the hen secures a greater variety, there will be more coloring matter in the food, especially from the several grasses. In winter, when dry food is used, the coloring matter is not so abundant. In proof of this, feed a few cooked carrots to the hens, and the yolk will have a deeper color, but will not necessarily be better in quality.

Edward Brown, a great English authority, says that to prevent egg-eating, a blown egg should be filled with a strong mixture of mustard and cayenne pepper, closing up the ends with gummed paper. Leave this in the nest, and if the hen tries to eat it she will get a dose she does not like, which may be a deterrent. Sometimes it is due to the want of shell-forming materials, the supply of which will stop the trouble. If these fail, the only other way is to make a nest in which the eggs will roll down to a lower compartment as soon as laid. Take a box about 18 inches square, with sides about 8 inches high, but no top. In this nest the bottom must be made slightly convex, so that whatever is put therein will roll to the sides Around the sides, within the box, and bout half way up, place a shelf, about 3 i hes broad, so that when an egg is laid it will roll beneath the shelf, and out of the hen's reach. It is best to fix a dummy egg in the apex of the bottom, and the sides where the eggs roll should

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Dairy Industry of 1897.

By C. C. Macdonald, Dairy Superintendent.

The season of 1897 has superceded all others in the dairy history of Manitoba. There has been a rapid progress in every detail of the industry. The season for butter and cheese making opened up fully one month earlier than the season of 1896 or 1895 did. The pasturage was all that could be desired at the time the nilch cows were turned out of the stables for business for the season. The output of creamery butter has been very much increased, while the cheese output has just about held its own with the output of The cheese department of other years. the dairy industry of Manitoba got heavy setback during the seasons of 1895 and 1896, owing to the low prices that were paid. The market price of cheese was correspondingly low in all the other provinces of Canada. So Manitoba was not alone in that. The farmers of the other provinces stuck to their business of producing cheese through the time of low prices, and were consequently in the business when the good prices came, and got the benefit of it. In this respect the In this respect Manitoba farmers, especially in the English-speaking districts, are subject to criticism in that they have not as yet learned to stick to the business steadily. the price of cheese is up they go producing it, and as soon as the price is low they drop out, regardless of the cost of getting out. There are three or four factories in consequence that are monuments of a lack of good dairy business thought. This is the reason that the cheese output of this year has just about held its own. The production where cheese has been manufactured has been larger than in other years, except in one or two instances. The market price of cheese this year has averaged 8½ cents per pound in the factories. The prices paid at creamerthe factories. ies for butter have been steadier and higher during this season than in past seasons; the increase in prices has been nearly 2c. on an average higher. The average price paid at the creameries for the season of 1897 is 18c. per pound.

From my carefully compiled figures, taken from creamery statements, which oreamery butter for the season of 1897 is 987,179 lbs., which sold at an average price of 18c. per lb., making a total of \$177,692.22, being an increase of \$50,482.22 for creamery butter over last year. for creamery butter over last year. While the output of cheese from the same source of information proves to be 987,007 lbs., which sold at an average price of S₂c. per lb., making a total of \$83,895.59. Making a grand total from both creameries and cheese factories of \$261,587.81. These figures show the increased value of the output for 1897 of \$60,965.41 over the season of 1896.

The whole output of both creamery butter and cheese was shipped to British Columbia by the leading produce firms of the city, with the exception of one or two small lots which were shipped to Montreal and two car loads which were shipped by one manufacturer direct to England. will give some idea of the rapid developand growth of the mining districts ritish Columbia. The mining sec-

increasing in that province is still further shown by the fact that, as reported, all the creamery output from the government creamery in the Northwest Territories was also shipped to the B. C. markets. The quality of the Manitoba article has proved to be prime in all cases and has found a ready market all the year. The year has been an excellent one, and the farmers of the province have every reason to be satisfied with the outcome. Dairving in Manitoba is now one of the staple industries, and the milk production throughout The sec the province is fast increasing. retary of each creamery and cheese factory has reported milk production increas-

The creameries of Manitoba are mostly managed on the co-operation plan, being under direct control of the farmers themselves, who appoint a board of executors each year. Whenever the farmers have been approached individually as to the result of the year's dairy work, in every case they have expressed themselves as being "well satisfied."

This increase in the output this year only goes to prove what a desirable country for dairy or mixed farming Manitoba really is, and if the industry keeps pace for the next few years with what it has done in the past three years, Manitoba will be equal to any other province in the dairy world.

There were 27 creameries and 47 cheese factories in operation this year. To show the growth of the industry during the past three years, the following figures will give a correct idea. In 1894 there were five creameries and 17 cheese factories in operation. The value of the output was then estimated to be \$34,000. In 1895 there were 14 new creameries, making 19 in all, and 35 new cheese factories, making 52 n. all. The actual value of the output was then \$192,000. In 1896 there were five more new creameries established, making 24 in all, while some of the cheese factories closed, making 48 in operation. value of the output was then \$200,622.40. In 1897 five additional creameries were established, making 29 in all (two of the older established ones ceased operations for some unaccountable reason). cheese factories remained about the same. The value of this season's output is as given above, which shows an enormous increase. It is very gratifying to know that the efforts of the Manitoba government, coupled with those of the farmers of the province, have been crowned with

R. M. Ballantyne thinks that 25 Ontario cheese factories will put in butter

At a recent meeting of the Northwest Dairymen's Association, Wm. Trant was appointed secretary, instead of Mr. Jow-

Mr. Prescott Park, of the Whitewood creamery, goes to Kingston Dairy School for the winter, and may start a western creamery on his own account next sum-

Canada's exports of butter to Great Britain doubled last year, while those of France, Sweden, Germany and Belgium decreased, and the exports of Denmark even increased by less than three per cent.

The scrub which shows more than ordinary merit at the pail, has a pedigree back of her somewhere. A good milch cow is not the product of a day, nor a mere matter of accident. She is a gradual development.

The Moose Jaw Times corrects The Nor'-West Farmer as to the butter yield there last summer. They made close on 50,000 lbs., and would have had much more but for the fine harvest, which inof British Columbia. The mining sections have taken the bulk of the butter from the province. That the demand is they might attend to their wheat.

When you get a separator knock to pieces every swill barrel on the farm. Feed the calves and pigs as soon as the milk is separated. The milking and feeding is soon done, and there is no afterhandling of the milk. The stock gets the milk sweet, warm and regularly, which is all in the line of advantage.

One of the main faults of the fancy Ayrshire is the small teats and patent ud-Thos. Ballantyne, when last in Scotland, sought for a business Ayrshire, a big, well-framed cow, with good thick vessel, well carried forward, gripped well up behind, and a teat that can be got hold of with more than two fingers.

A detailed statement of the work of the Neepawa creamery shows results as follows for 1897: May, 4,000 lbs., sold at 17 cents; June, 5,000 lbs., sold at 15 cents; July, 5,800 lbs., sold at 15\frac{3}{4} cents; Aug., 5,700 lbs., sold at 18\frac{1}{2} cts. In harvest the output was much reduced, and no returns are yet published. When the creamery sold at 15c., stores were paying 8c., mostly in trade. The contrast needs no comment.

The Brandon Central creamery closed for the season on Nov. 15th. The total make is 60,443 lbs. Mr. Bousfield had intended running most of the winter, but the scarcity of feed and the keen demand for dairy butter was against him; but, notwithstanding these difficulties, 25 or 30 farmers continued to send their cream till the close. The amounts generally sent by each patron ran from 500 to 1,700 lbs. Mr. C. Northam, of Rapid City, headed the list, while several others came close to that amount. Mr. E. F. Dobbin, of Melita, sent the largest amount in one month. From fifteen cows he sent 500 lbs. He uses a separator. In connection with the business Mr. Bousfield has sold nearly 100 separators during the season. An interesting circular of details is being issued.—Brandon Sun.

Gold Medal Winner at Montreal Exposition, 1897.

Wells, Richardson & Co.'s "Improved Butter Color" Won a Great Victory for Mr. J. A Hayes, Waterloo, P.O.

The Autumn Expositions and Fairs held in various parts of the Dominion this year, gave ample proof of the great superiority of Wells, Richardson & Co.'s "Improved Butter Color."

Every exhibitor of Creamery and Dairy Butter, who used "Improved Butter Color," scored very high; users of the CHEAP and MUDDY colors were nowhere in the different competitions.

Mr. J. A. Hayes, Waterloo, P. Q., winner of the Gold Medal for the finest creamery butter exhibited in Montreal, writes as follows:—

"It was an easy matter for me to use Wells, Richardson & Co.'s "Improved Butter Color" in competing for prize, as I never have any other in the Creamery. I have been using your Color for the last eight years, and it has always given me the greatest possible satisfac-I have tried two or three other kinds, but have found none so uniformly pure and reliable as Wells, Richardson & Co.'s "Improved Butter Color." You richly deserve all the good I can say of

EDWARD BOYCE, MANUFACTURER.

3 % TO 322 ROSS ST., WINNIPEC, MAN. Grocery, Butcher, Baker and Commercial Wagous and Sleighs.



While our columns are always open for the discus sion of any relevant subject, we do not necessarily indorse the opinions of all contributors. Correspondents will kindly write on one side of the sheet only and in every case give the name—not necessarily for publication, but as a guarantee of good faith. All correspondence will be subject to revision.

THE CREAM FOAMS.

W. L. Stafford, Springfield, has churned four times and has been unable to get any butter. Cream seemed to come to a foam, which had been frozen prior to churning. What is the matter?

Answer.—The main trouble with the cream at Mr. Stafford's dairy at Spring-field is that the cream is not sufficiently ripened for churning. The cream having been frozen would not injure it very materially, except, in that it would take a much longer time to properly ripen it than it would had it not been frozen. Cream that has been gathered for churning should not have any other cream mixed with it to within, at least, 12 hours prior to churning. It should be heated to a temperature of 70° Fahr. in winter and held at that temperature for 12 hours prior to churning to allow it to ripen or sour. When it is ready to churn, which will be known by the taste and appearance, which is slightly acid and of the consistency of white paint when ready for use; the cream should have a glossy The temperature of the appearance. cream, when it is put into the churn, should be 62° to 64° Fahr. Cream treated in this way should not take over 35 minutes for the butter to come. If Mr. Stafford has not got a correct thermometer he must get one and look well to the temperatures at the different stages of butter-making, if he desires success. Cows should have plenty of salt at all times. The cream from the milk of even one fresh milch cow added to that of cows that are advanced in lactation is a great benefit to butter-makers, as it gives the butter the desired rosy flavor and aids in ripening the rest of the cream. would like to hear, through The Farmer, of Mr. Stafford's success, or. rather, the results of his future efforts in butter-

C. C. MACDONALD.

WANTS POLLED ANGUS CATTLE.

A. L. Jones, Boissevain, writes:—
"Having sold my entire herd of grade cattle, I am desirous of corresponding with Polled Angus breeders, with a view of purchasing the foundation for a herd of thoroughbreds. I want to get the addresses of breeders."

Answer.—John Traquair, Welwyn, Assa., and A. Cumming, Rossburn, Man., were successful exhibitors at the Winnipeg Industrial. D. McFarlane, Oak Lake; John Turner and A. H. Knott, Souris, will most likely find them, as they exhibited there. Be sure to find out all you can about freight rates, and it would be well to see the stock yourself before deciding.

LOSSES BY PRAIRIE FIRES.

J.W., Grassmere, Man., writes: "Could you kindly inform me if it is the case that the Canadian Pacific Railway Co. has inspected the quantities of hay supposed to be burned in Rosser municipality with the great prairie fire some time ago."

Answer.—The Farmer made enquiry from the manager's office of the C.P.R., and the reply received is as follows:—
"We have no claim from Mr. W., but have under consideration some claims from the same vicinity. The investigation made, however, does not show that the Stonewall fire started from our line. It evidently had some local cause apart from our line." We would advise you to file a claim and have the matter investigated.

HOLSTEIN FEEDING AND BREED-ING.

W. J. Hindmarch, Cannington Manor, Assa, writes:—"Grain feed is very high at points where freight from mills is to be added, but with oats over a cent per lb., it is still a question whether it is not more profitable to sell them and replace them with some mill feed. In October bran, oil meal and shorts were of about equal value for nutrients contained, but now the bran is higher, leaving oil cake the cheapest feed to buy and far away cheaper to feed than crushed oats, and especially when we consider it is the one feed we can buy out here that will in any way help to narrow the ration ratio. The patrons of the creameries that I have spoken to seem well satisfied with the returns from their cream, and there seems no doubt of the assured success of the gathered cream system in the N. W. T. So many successful creameries should make some demand for dairy cattle, but as yet business can only be done at very low prices and easy terms. I have sold thirteen head since April 1, grades and pure breds. Good heifers and calves have gone at \$27 to \$50, according to breeding. I imported last May five head from ing. I imported last May five head in H. Stevens & Sons, of Lacona, N. Y. but I tested twelve fresh cows by the Babcock test. Milk sampled and tested by myself, and on two milkings the tests ranged from 3.8 to 4.6 per cent. fat. Among them is a heifer sired by a son of DeKol 2nd, he by a son of Pauline Paul. Her dam tested as high as 5.2 per cent. in H. F. butter test. There is one by a son of Pieterje 3rd, and one of one by a son of Fieterje sid, and one of Inka, and an old cow with a hide like velvet. Her test was 4.2; her dam tested 4 fat. These are bred to my Jewel bull. His heifers are a very fine, promising to. all showing good milking qualities. So far, my stock has all given good satisfaction to buyers, and has nearly all been bought unseen. I have a few heifers from 8 months' to 21 months' old, and a couple of bull calves to offer. These comprise some fine heifers.

LUMPY JAW CURE.

W. A. Doyle, Beulah, Man., writes The Farmer as follows:—"As the disease commonly called lumpy jaw is becoming very prevalent in our province, all farmers should be vigilant and promptly treat it on its first appearance. ing I find, from my experience, that Fleming's Lumpy Jaw Cure, advertised in your paper, is a most satisfactory article. By following the simple directions of the vendors, I have recently cured two young cows so completely that one cannot know that either of the animals had been afflicted. The lumps were some five months old and about the size of a large apple, and two applications of the liquid effected a cure in one month. The lumps disappeared by sloughing off in about two weeks from first application. In curing these two animals I have used one quarter of a \$2 bottle, which equals 25 cents cost of curing each beast. Heretofore I had used the iodide of potassium curwithout avail. I have therefore much these cars.

pleasure in recommending stock owners to use this cure."

Note.—This unsolicited testimonial from a man so well and widely known as Mr. Doyle must be very gratifying to the vendors, and should be made a note of by every cattle owner.

THAT MOLE AGAIN.

XXX, Roland, Man., writes:—"I think I can throw some light on the pocket gopher question. I believe that it is the animal scientincally termed the mole-rat, common in Turkey and Russia. Being a vegetable feeder, unlike the mole, it is classed with the rodents, i. e., rats, mice, or rabbits. Like its native prairie, for which the speech of England has no name, it is nameless in our tongue. I would suggest that it be called tunneller, if no better name can be imported."

THE MANITOBA WASHER.

A Farmer,, Assiniboia, writes us as follows:—" Will you allow me to say a few words to farmers through the Nor'-West Farmer about washing day? I have been on the lookout for a machine to make that day easier, and while at the Winnipeg Industrial last summer, I decided to buy a Manitoba Washer. wanted a machine that could be run by power, other than wife power, as I have read and believe that that is the most expensive power a farmer can use, and having a tread power to run the separator and churn, I wanted to make the horse do the washing as well. I bought a large size machine, made a pulley for it, and find it works like a charm. We find the machine does all that is claimed for it. To-day my wife put out a week's washing for ten of a family in five hours; no rubbing, the hardest part of the work is turning the wringer. Now, I believe there is quite a large number of your readers that have the power all ready, and if they only knew the washing could be done so much easier and at so little expense, they would get a machine at once. Hoping this will induce others to try this plan of washing, and thereby take a heavy burden from the (in many cases) overworked wives, and make life more pleasant on the farm."

Send in your subscription to The Nor'-West Farmer at once. Don't put it off; do it now.

Frank McGuire, a Souris farmer, has invented a windmill, now on view at the Brandon Machine Works, that promises to be a great boon to farmers who want cheap power. For \$35 he expects to rig up a portable mill that can be hauled on a stone boat, or fixed on a roof, that will pump, saw and chop enough for any ordinary barn. Another farmer has invented an apparatus for clearing scrub land, for which great fitness is claimed by the inventor.

The annual winter excursion, \$40 round trip tickets are now on sale to Eastern Canada. This is your opportunity to visit the old folks in Ontario and Quebec. In connection with these excursions the Northern Pacific railway have arranged to run every Tuesday in December through Pullman tourist upholstered sleepers to St. Paul, charging at the rate of one dollar per double berth. This car makes direct connection at the same depot with all daylight trains to Chicago, at which point connection is made the same evening with through trains of the Grand Trunk, Wabash and Michigan Central for all Canadian points. Any agent of the Northern Pacific will cheerfully give you any information or secure reservations in these cars.



Calf Mountain and Manitou.

Manitoba, although the youngest prov-Manitoba, although the youngest province of the Dominion, has been making history for a good few years. To me the details of local history are about as interesting as the wider field of politics, in which some people find their world. The other day, riding from Calf Mountain the Manitoty place with Alfred the tain to Manitou along with Alfred, the youngest brother of S. A. Bedford, we passed a hole in the ground that to me is an interesting landmark in local history. It was alongside the old Commission trail, and marks the site of what was once a very lively hotel in the town of Darlingford. The town itself was a very lively one while it lasted. The late Hon. John Norquay and other front rank men controlled the town site, and it had a race course, which by some is regarded as an adjunct of advancing civilization. But the pace was too fast, and not very long after I found some of the leading business men of Darlingford making a fresh start at a Dakota town on the skirts of the Turtle Mountain, whose Sunday name was St. John's. Its everyday name, and one quite as appropriate, was Runaway Harbor, and some of the citizens seemed to feel more comfortable when they found out that I was not a sheriff's officer

A half a dozen miles further east on the same trail, I had passed another relic, the shell of a Wesleyan chapel, waiting till the wind lifted it or somebody would pull it down. The difference between the empty church and the hole in the ground at Darlingford was that the two sets of projectors had started on different lines. The backers of the race course are gone and forgotten. The backers of the church are there still, and deserted it to build a more substantial and commodicine build. more substantial and commodious building, the Presbyterian element being represented by another new church at the opposite end of the same section of land.
The backers of the boom town and running horses are out of the running. The ning horses are out of the running. The other fellows are still in the field, and could pay \$200 apiece to start new churches, at the same time building solid new barns and granaries for their own convenience and profit venience and profit.

venience and profit.

It is ten years since I last set foot in that country, and still longer since I first made its acquaintance. S. A. Bedford was then unknown outside of his own district, but discerning eyes could see then the beginnings of what he is now. His farm is now held in pasture by his brother who also works their father's land along with his own. His brother-in-law, Ferris Bolton, for a long time reeve of the district, has just built a capital new barn on trict, has just built a capital new barn on the other side of the road, and a short distance west of him the Scott Bros. have another splendid barn, and on every hand there are evidences of the staying power of the right kind of men. The brothers White, Mart, Nichol, Messrs. Stevens, Jas. Hill, and others, are each in his own way doing their share to maintain the reputation of this good old country. Thornhill, where much of the wheat of the district is marketed, has always been noted for the quality of its wheat, and has won the highest prize at the provincial. This year Charles Patterson was 1st at Mor-den with an excellent sample, and the

way in which good wheat finds its value without the help of a fancy grade to do it justice. Some of the farms I went through had rather pretentious dwellings, but in other cases the old house is stuck to, while near it is a big feeding barn, with a good stone basement and a detached granary, as well. Several others are projected for next year. There is no end of building stone, and stone walls are found in some cases cheaper than lumber. The Methodist chapel, before referred to, is one of the finest, if not the very finest, pieces of masonry I have seen in the province, and looks as if every stone had been picked. Mr. Motheral's residence, near Manitou, is another beautiful piece of stone work. In some cases the farmer of stone work. In some cases the tarmer has been his own mason, and made very fair work. I think I could name one stone basement, not in this district, that is as good as ever after the woodwork has been twice burnt off it, and that is a strong point in favor of the stone. I mention these things because there are farmers handy enough to build their own farmers handy enough to build their own walls and save the mason's hire, which is waits and save the mason's hire, which is sometimes pretty steep in this country of short summers. I have seen building done by a farmer in stone that I would rank equal in quality to the work of many a professional, and all done while his wheat crop was growing.

After twenty years' grain growing it is interesting to collect the opinions of the men best posted in the work. The big barns all round indicate pretty correctly where they are at. The best of them say they must manure freely and use rotation crops, now that the virgin force is worked out of the soil. Well fed cattle make rich manure, and a good block is manured every year, pretty frequently, by spreading on the land each day's cleanings from the stable. Some believe in laying it up on a pile to heat and so kill the foul seeds. But I am pretty certain that a large proportion of the seeds are not killed in this way. If the manure gets cooled and settles into a compact mass, much of the virtue has gone off in the previous province of beginning and one unstanted seeds cess of heating, and any unstarted seeds in that heap will keep quite sound. Alex. Cochrane points out another advantage from winter spreading. The manure prevents evaporation from the land, acting as a mulch, so that when in May it is plowed in for a barley crop, the seed germinates at once and grows freely. Bare land has by that time got often very dry, and the seed makes slow germination. Barley after manure, and wheat after that, is the rule with all best men. The rotation on a half section is something like this: Barley after manure, then one or two crops of wheat, followed by oats, in which timothy is sown nearer the surface than the grain. After two crops of tim-othy, wheat and another round of manure. The land when fall plowed after wheat is disked at seed time. Seed put in two inches deep, preferably with a press drill, the grass seeds broadcasted by the same machine, and the whole rolled immediately with the sap in it. After the rolling in ly with the sap in it. After the rolling in this way the soil does not lift in spring winds. If let dry a day, the whole job may be ruined. I have seen exactly the same result at Indian Head, where spring winds are extra bad. Roll after the land has got a day's drying, and the whole mould, seed included, may go off the first windy day. Men, both in this neighbor. windy day. Men, both in this neighbor-hood and elsewhere, who can see pretty well into a millstone, assure me that on lands cropped for any time summer fallowing will no longer do what it once did, and good manure is the only reliable standby. Fallow alone may raise all the straw it did before, but it is only after manure has done its work that the bushel manure has done its work that the bushel gets filled. There may be differences in teamster with whom I rode part of the way got 80c. at a time when quotations figured at 78c. as the highest. That is the

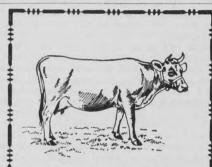
We wish we could make everybody believe that promptness is prevention; that there should be no delay when you are losing flesh and when you are pale, especially if a cough be present. The continued use of Scott's Emulsion in the early stages of lung affections does prevent the development of Consumption. Your doctor will tell you this is true and we state it without wishing to make any false claims or false promises. Free book tells more on the subject.

SCOTT & BOWNE, Toronto.

ARKELL'S DRUG STORE CARBERRY.

REMEMBER OUR DRUGS ARE STRICTLY PURE.

Our stock of Medicines and Patents is complete. You get what you want. Bring us your prescription or family recipes and get it filled with the right thing, at right prices.



A Common Bred Cow

When toned up by Dick's Blood Purifier will give as much and as rich milk as a highly bred aristocratic Jersey cow gives upon ordinary feed, and a Jersey cow when given

Dick's Blood Purifier

will wonderfully increase her yield of milk. It saves feed toobecause a smaller amount of well digested food satisfies the demands of the system and every particle of nourishment sticks.

50 CENTS A PACKAGE.

LEEMING, MILES & CO., Agents, Montreal.

DICK & CO., Proprietors.

perience and science proves, I think, that the insoluble plant food still in our soils needs manure to quicken it into active action

Another point has got firmly established in the minds of the best men. There is more profit in well bred stock than any other, and the profit is greater the earlier the steer can be finished. The Short-horns of such men as J. S. Robson have helped to grade up to a very satisfactory level much of the stock round, and there have been other good bulls from the east, whose steers can be put in as 2-yearclds and finished next spring to 1,400 lbs. To winter them even on straw costs, both for labor and house room, and by giving chop at once, time and money is saved. The barley raised makes cheap chop, and an acre of turnips gives a relish to the feed that keeps beef cattle hearty and laying on of flesh up to 300 lbs. of gain in the winter months. Mr. Cochrane chops straw with his wind-mill, and this is mixed with chopped grain and a taste of turnips. There is no likelihood of turnips being grown to any extent here, labor costs too much, but even a few gives relish to all the rest that is eaten. This is the course substantially followed by other well-known and successful feedrs all round, and I expect that little improvement can be made on it. Cattle so fed bring the very best price going, and do credit to the producers wherever they are sold.

Of all the big barns I have been in, both here and elsewhere, I can hardly recollect one that had not a big pile of unthreshed oats. Either chopped fine or eaten on the straw, this seems a favorite feed either for beef or milk. I know it is very poor feed eaten on the sheaf by pigs, but most other stock can take good value cut of it. Timothy is also frequently seen, but Mr. Robson is the only one in this tract of country that has gone in for brome, and now has a good breadth of it on land very well fitted to do justice to any kind of grass. It is always the land here where grass grows freely that is most subject to frosts, and harvest frosts all crawl into the low spots. I might go further if space permitted, but must call a halt.

On the whole, whatever may be the case elsewhere, mixed farming has found favor all over this section of country, and seems to have paid as nothing else would.

R. W. M.

A Visit to J. E. Smith's Stock Farm.

The farm buildings are situated about one mile north of Brandon. The barns are completely sheltered from the north and west winds by a hill which curves from the west behind the barns. M1. Smith has shown his good practical judgment in the locations of his barns, for when it is blowing almost a blizzard on the open prairie it is calm and pleasant around the barns. The new barn which he has built this year is a very substantial looking building, 36x72 feet in size, with a stone wall for the stable 10 feet in height. The stable is thus high and airy, while a driveway into the barn above can easily be made from the north side. Smith is evidently not a lover of darkness rather than light, for the first thing that strikes you as you enter the stable is its well-lighted, cheerful appearance. There are no less than twelve small windows in the stable, and one can walk in and inspect the stock accurately with pleasure, and without any danger of falling into unseen pitfalls.

Tamarac lumber only is used in the buildings, as Mr. Smith says he has learned by experience that it is much more durable than pine or spruce. He would have preferred a cement floor for the pass- at Guelph.

age behind the stock, but the high price of cement (something like \$5 a barrel) would make it too expensive.

The stock are arranged in stalls on each side, facing a feed passage five feet wide in the centre. The mangers are low in front, close, built from the floor, with the back projecting at a good angle out into the feed passage, so that hay and grain can very conveniently be dropped into them. The stable is ventilated by two-inch gas pipes, which are imbedded through the stone well near the ceiling. The stock at present are to be led out for water. This involves more labor, but Mr. Smith thinks that the exercise gained is very beneficial to the animals, and he has as yet seen no arrangement by which the stock can be successfully supplied with clean, wholesome water in manger.

This stable is intended entirely for the use of bulls. At present there are 35 Herefords and 40 Shorthorns on hand, ranging from 9 to 15 months' old. Some of these are still out at the Beresford farm, 18 miles south of Brandon. These in the stables are a fine thrifty looking lot of bulls. They had just been brought in from the pasture a few days since, and are in fine condition for animals which have had to rustle for their living. Many of the Herefords were fat, and Mr. Smith values them very highly as grazers, for they will do well on pasture where other breeds would starve.

The breeding cows and the calves are kept in the east end of the old stable. This is a large building, and will hold 100 head of stock when full. There were about 20 pure bred Shorthorn calves in These calves were as strong box stalls. box stalls. These calves were as strong and thrifty looking a lot of animals as I had ever seen, considering that they were not being fed for show purposes.

His stock bull, Lord Stanley II, is a splendid specimen of the Shorthorn breed. His straight outlines, rangy yet

compact body, full breast and masculine head all indicate that he should be a good stock getter.

In the west end of the stable the Clydesdale stallions are kept in commodious box stalls. In these are some horses, such as Sir Arthur, which are already famous throughout the province for their prize progeny. In another stall is Scotch Champion, a compactly built, low set animal, with a light, spirited carriage, and a rich dark color for a Clydesdale. There were also several good looking colts in the stable. If one follows Mr. Smith, us he hustles around through his buildings, he is not long in discovering the secret of his success. It is his untiring industry and close application to the minute details of the work, coupled with a naturally intuitive judgment in the selection and mating of stock.

I. R. O.

At a recent plowing match in the south of England 153 plows started.

Sixty thousand dollars has, last year, been spent on buildings in the town of Neepawa, and a great deal more in the country round it.

At a recent Ontario Farmers' Institute one of the speakers contended for the very same point made in Mr. Mackay's paper in this issue, that shelter belts will help their grain crop. They help to prevent the land drying out.

The next annual meeting of the Ontario Agricultural and Experimental Union is to be held at the Agricultural College, Guelph, on the 8th, 9th and 10th of December. Addresses on live agricultural topics will be given by able speakers. At the same date the Christmas Fat Stock and Poultry show will be held



pioneers were tortured and at the burned at the stake by cruel Indians. The tortures dured these martyrs must something horrible. are There thousands of

men to-day who are be-ing slowly tortured to death at the stake of disease.

bodies cry out but in a language that only the sufferers themselves can hear. When a man is suffering in this way his body cries out with an aching head, a sluggish body, muscles that are lax and lazy, a brain that is dull, a stomach that disdains food and nerves that will not rest.

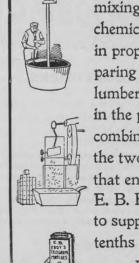
that is dull, a stomach that disdains food and nerves that will not rest.

A wise man will heed these warnings and will resort to the right remedy before it is too late. Dr. Pierce's Golden Medical Discovery makes the appetite keen and hearty. It invigorates the liver. It promotes the natural processes of secretion and excretion. It makes the digestion and assimilation perfect. It purifies the blood and fills it with the life-giving elements of the food. It tears down old and worn-out tissues and replaces them with the firm, muscular tissues of health. It is the great blood-maker and flesh-builder. It is the best nerve tonic. It cures 98 per cent. of all cases of consumption, weak lungs, bronchitis, lingering coughs and kindred ailments. Found at all medicine stores. Accept no substitute that may be represented as "just as good." The "just as good." kind doesn't effect cures like the following:

"Twenty-five years ago eight different doctors."

"Twenty-five years ago eight different doctors told me that I would live but a short time, that I had consumption and must die," writes Geo. R. Coope, Esq., of Myers Valley, Pottawatomie Co., Kans. "I finally commenced taking Dr. Plerce's Golden Medical Discovery and am still in the land and among the living."

Don't suffer from constipation. Keep the body clean inside as well as outside. Dr. Pierce's Pleasant Pellets cure con-stipation and biliousness. They never gripe. All good dealers have them. Mention The Nor'-West Farmer when writing.



It's the skill in mixing the best chemicals in properly preparing the finest lumberin the perfect combination of the twothat enables the E. B. Eddy Co. to supply ninetenths of Canada with

Mention The Nor'-West Farmer when writing.

NOR'-WEST FARMER

The only Agricultural Paper printed in Canada be-tween Lake Superior and the Pacific Coast.

THE STOVEL COMPANY. PROPRIETORS

CORNER McDermot Ave. and Arthur St. WINNIPEG. MANITOBA.

SUBSCRIPTION to Canada or the U.S., \$1 a year, in advance. To Great Britain \$1.25 (5s. sterling).

Agents wanted to canvass in every locality, to whom liberal commissions will be given.

ADVERTISING RATES.

ADVERTISING RATES.

Transient advertisements, for less than three months, 15c. a line (each insertion). Terms for longer periods on application.

All advertisements estimated on the Nonpareil line—12 lines to an inch. A column contains 128 lines. Copy for changes in advertisements should be sent in not later than the 20th of the month to ensure classified location in the next month's issue. Copy for new advertisements should reach the office by the 30th of each month.

TO OUR SUBSCRIBERS.

TO OUR SUBSCRIBERS.

It is the intention of the publishers of this paper to admit into their columns none but reliable advertisers, and we believe that all the advertisements in this paper are from such parties. If subscribers find any of them to be otherwise, we will esteem it a favour if they will advise us, and we will at any time give our personal attention to any complaints which we receive. Always mention this paper when answering advertisements, as advertisers often advertise different things in several papers.

LETTERS.

Either on business or editorial matters, should be addressed simply "THE NOR'-WEST FARMER, Winnipeg," and not to any individual by name.

Look at Your Subscription Label.

When you pay your subscription, watch the name label on the next two issues which you receive. On the first issue following payment, it might not give the correct date—the type-setting machine may make an error and the proof not corrected before mailing day. But if the date is not correct on the SECOND issue please notify us by postal card.

Look at the date label now. Are you in arrears? Are you "paidup" to the present date? The label will tell you. If in arrears, please renew promptly.

WINNIPEG, DECEMBER, 1897.

Carefully ~ d our Premium and Club-Offers to be found else-this issue. There are some bing L where snaps - mongst them.



PRIZE COMPETITIONS.

The publishers of The Nor'-West Farmer have pleasure in announcing that they will award cash prizes as follows :-

1. STOCKMEN.

Two cash prizes of \$5.00 each will be given for the best two letters on any subject of interest to those connected with the care or raising of Each letter should contain some live stock. suggestion which may possibly be of use to other live stock readers of The Nor'-West Farmer. This should be about a column or two columns in length.

2. DAIRYMEN.

Two cash prizes of \$5.00 each will be given for the best two letters on any topic of interest to those connected with dairying or dairy farming. Each letter should contain some suggestion which may possibly be of use to the dairy readers of The Nor'-West Farmer. This should also be about a column and a half or two columns in length.

3. POULTRY-KEEPERS.

the best two letters on any matter of practical value connected with the keeping of poultry. Each letter should contain some suggestion which may possibly be of use to the poultry readers of The Nor'-West Farmer. This should be about half a column to a column in length.

4. GARDENERS.

Two cash prizes of \$2.50 each will be given for the best two letters on any matter of practical value connected with keeping a small garden for profit. This should also be about half a column to a column in length.

5. GENERAL READERS.

Four cash prizes of \$2.50 each will be given to those who send us the best four letters on any topic (not mentioned above) of practical value to farmers and agriculturists in Manitoba or the Northwest. This should be about a column in length.

GENERAL REMARKS.

Competitors should address what they send to "The Nor'-West Farmer, Box 1310, Winnipeg, Man." and they must be paid-up subscribers to The Farmer.

No competitor may send more than one letter on any one subject, but may compete in each of the different subjects.

The time for receiving the different letters in all of the competitions will close on December 31st, 1897.

On the back of the last page the name and address of the sender should be written.

Write on one side only of each sheet of paper. In case three or more persons send prizewinning letters on any one subject, the prizes will be awarded to the sender whose letter is first opened.

It is also to be borne in mind that no names or addresses of competitors will be published in The Farmer if, when the competitions are sent in, a request is made + the publishers not to do so. The publishers' decision in every matter is to be accepted as final.

WANTED A POSTMORTEM.

It was an old Scotch "laird" that lav dying. His doctors were sorely puzzled to diagnose his ailments, and put him off with evasive answers. One day he ordered an old and confidential servant to hide himself in the room where doctors did their talking, and find out the truth. But he, too, was equally evasive. The laird got angry and insisted on having it out of him. "Weel," said the spy, "if ye of him. "Weel," said the spy, in you of him. they dinna ken, but they're sure it will be a' made plain at the post

We have for years perfor d the act of diagnosing by means of crop correspondents the amount and quality of our crops, and the only thing that we are sure of to-day is our ignorance of the exact truth. We have had no post mortem. It would knock daylight into the fancy estimates we have been indulging in. There is one place where such information could be got even now. But it is not the policy of the sole possessors of that information to declare the real facts of the case. Guess work suits them better, especially as all the guessing is on the big side of the truth. But just because it is so, every farmer should insist on having more reliable information. The reason is obvious. Tell a would-be purchaser that all you have to sell is in that wagon, and he wakes up. Tell him that you have more at home and he waits for further develop-ments. The Nor'-West Farmer has always maintained that exaggerated crop estimates, however got, are detrimental to the interests of the men who have a limited quantity to sell of an article in universal demand as our wheat is. The last crop estimate of this season is rather farther from the truth than any previous

men who aided in its production. We are simply stating what will soon be plain to every one. There is not nearly the wheat in this year's crop that has been given out to the world, and every week from now on will establish the correctness our "guess," if you choose to call it There is no reasonable ground for of our objecting to guesses made in August of the crop yields of the country. The mistake is in stopping there, when to stop there is against the best interests of the men who produce those crops. In short, we want a post mortem which the books of the threshers can very easily be made to supply. If after that we are sure, as this year we are quite sure without their help, that our crop figures are much too high, we will be more modest in our next year's estimates, and be money in pocket accordingly.

If any one wants further proof of the erroneous nature of our early estimates of this year's yields, let him talk to a few of the nearest threshermen. It will be a miracle if one in half a dozen of these men come out in a position to make payments on their machines, so disproportionate, as a rule, are the yields to the amount of straw. Had this incontestible fact been known two months ago, more money would have been paid for what there was to sell. The farmers have been too long the victims of guess work, and should insist on having returns prepared before Christmas of each year of the actual quantity threshed, for comparison with the guesses of August. To avoid having a post mortem on the farmer, we must have a reliable post mortem on the crops

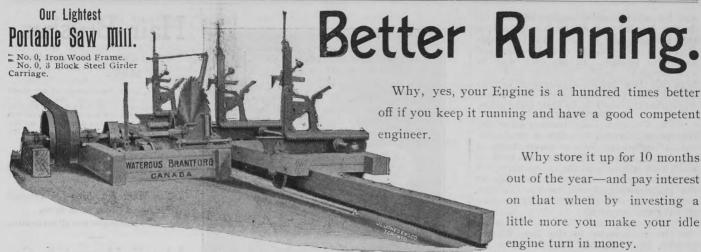
he grows, to be made at the end of every season henceforth.

AMERICAN BUTTER.

Our neighbors across the line are tremendous rustlers. They are bound to get ahead of all creation in whatever they take in hand. Among other things their Minister of Agrculture, an Americanized Scot from Iowa, has been showing an immense outflow of business energy in his department. Kites are flown into upper air in search of knowledge, farthest Charie in the homographical for projection of Siberia is to be ransacked for varieties of trees and plants, and in more civilized countries commissioners have gone hunting for openings for the sale of every kind of American products from wooden nutmegs up to trotting horses. All this is highly commendable and sound business, though according to English notions of international polity, it sounds a little queer to go all over the earth knocking at other people's doors for business, while at the same time keeping vigilant watch to hinder them from selling a dollars' worth in return, without first paying a heavy toll on all they have to In spite of this peculiarity, we think everybody has a right to follow his own favorite business methods, no matter how peculiar and one-sided, provided what he has to sell is wholesome and genuine, if he is not guilty of fraud or misrepresentation for the purpose of pushing his mercantile offerings on the market he seeks to capture.

The whole commercial world is familiar with the peculiar character of some of the food products that American enterprise has for many years been doing its hest to sell both at home and abroad. There is not any farming or newspaper in the United States, unless owned and kept by the oleomargarine manufacturers, that has faile to denounce and expose the villainous Aevices by which hog's lard, beef fat, horse grease, cotton seed oil and other to us unknown products 3. POULTRY-KEEPERS.

one. In saying this we are making no have been blended and tinctured in such the honesty of the a way as at times to deceive even butter



Why store it up for 10 months out of the year-and pay interest on that when by investing a little more you make your idle engine turn in money.

Consider

A PORTABLE SAW MILL, A WOOD CHOPPER, A STANDARD CHOPPER, A LATH MILL, A SHINGLE MILL, The Purchase of A WOOD SAW RIG,

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ADDRESS--

WATEROUS.

MANITOBA.

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experts as to the true character and origin these delectable compounds. who have read only a tithe of what has been written against oleomargarine by every reputable dairy paper in the States need not be told how vile are the compounds and how skilfully concocted by the wealthy men who alone can carry on the business. For this reason American butter, so called, has been carefully avoidbutter, so called, has been carefully avoided by every honest dealer at home and abroad, and nearly every State of the Union itself has imposed severe penalties on the sale of margarine under any disguise. Only the other day a hotel man in Grand Forks was severely fined for putting this bogus butter on his table as the genuine article. as the genuine article.

It is the same with their cheese. Filled cheese, the filling done with grease compounds to give the original skim milk a fatty flavor, is an equally well-known product of American duct of American genius. It is hardly necessary to state here that Canadian law is especially severe against the manufacture at home or importation from the talented makers south of us of any of these fraudulent imitations, and as a matter of course our cheese is wanted on the best markets and brings us large annual returns. The same is true of our butter, and only the other day at London dairy show a pyramid of these Canadian products was awarded special honors.

As already noted, Secretary Wilson is a hustler, and knowing only too well the character. American dairy products had earned for themselves at home and abroad, he heroically undertook to rehabilitate that reputation by a new and highly virtuous departure. The merchants with whom he tried to deal were very shy indeed of his approaches; they knew too much already of the virtues of Amer-ican butter, but by strenuous efforts he did get London wholesalers to handle a limited quantity of samples of genuine butter made for the purpose on State Experiment Stations and by other skilled dairymen of deservedly high reputation. They can make splendid butter in the States, but rascality has hitherto had command of the field, and it was a big

cently issued, thus writes: "The products of the United States and of Denmark have been found to be the only absolutely pure butter imported into England; all others, including the products of British colonies, contain more or less injurious ingredients, used as preservatives.' It is one of the familiar weaknesses of those who have suddenly become virtuous that they begin too early to think themselves as good as those who have never sinned. But this premature self-appreciation is only a weakness, not a crime. Secretary Wilson, however, goes a good way beyond the recital of his own virtues and the meritorious exertions of his department. He very decidedly bears witness against his neighbor. he had been only an ordinary American liar, this would have excited little surprise, but he hails from the land of the Covenant, and must have been taught the ten commandments at the parish school. Perhaps he wanted to be more American than the ordinary Yankee and wanted popular favor by telling them how virtuous they were above all others, Denmark only excepted, and perhaps thought but admiring Vankees would read nobody but admiring Yankees would read his report. Whatever he meant the murder is out, the lie is nailed and if he wants a record for more than Yankee smartness he will prove his assertions about the serious defects in colonial butter, ours included, or apologise, for his unjust imputations. He will be in no hurry to do either.

IN MEMORIAM.

Within the last month, and on the very same day, there have passed away, with startling suddenness, two of the most noteworthy pioneers of Western Manitoba. Each in his own field was a front rank man and bound to stay there as long as he lived. Our whole country is poorer for their loss. No one in his own profession will question the professional skill of the late Dr. Fleming. He fell a victim to the tireless energy with which he worked till the very last day. command of the held, and it was a big contract to upset the reputation so earned, even to get solid footing on which to make a beginning for such uphill work. Secretary Wilson is, naturally, somewhat elated by his first season's efforts to wipe out the tricky reputation of his adopted country in the dairy markets of the world, and in his report for 1897, re-

working life were most prepared to wonder how he was able to stand so long the long night rides, the uncertain hours and perpetual strain involved in his enormous practice. His genial manner and sym-pathetic nature helped quite as much as his professional skill to endear him to a much wider constituency of patients than the fictitious Weelum McLure, to whom he has been happily compared, had ever the chance to care for. But, highly valued and loved as he was professionally, he was as much honored as a citizen even by those with whom his forward detectation. those with whom his fervent detestation of what he regarded as time-serving principles brought him for the time being into opposition. But for the exigencies of his profession he could have had a front rank position in politics, and if honesty and singleness of purpose are worth havand singleness of purpose are worth having, he would have kept it too. His convictions were too radical for an every-day politician, or place man. Last, and best of all, he was a Christian both in deed and word; a brave, true man, ever ready to contend for the truth and the right as he saw it, and he saw that as he saw most things, very clearly, indeed. He went to sleep after his day's work apparently as well in health as ever. But the wheel was broken at the fountain, and he was not, for God took him.

Samuel Hanna was, in his own line and in his own district, extremely well-known, both as a capable and successful farmer and a good way outside his own riding as a keen and consistent Conservariding as a keen and consistent Conservative. As such he ran and was defeated at the general election of 1886. As a farmer worthy in most things to be held up as a model, this paper has always kept an eye on his work. His judgment was not often at fault. He selected a good homestead and pre-emption, round which he secured enough more land world by he secured enough more land, varied by wood and water, but all profitably fertile, to make his the finest estate in the country. He began with the resolution not to put a dollar into improvements that he had not first taken out of the land itself, and, acting on this principle, he lived in a makeshift little place, when poorer men were building more ostentatiously,

and by what simple fatality he met his death. He left many friends, and few, if any, enemies, and was a splendid example of the hard-working, clear-headed, and successful pioneer. In his own way he was decidedly public spirited, and perhaps his last public appearance of any note was as president of the Lansdowne Agricultural society at its Oak Lake show.

The Crescent Lake farmers have this last summer graded 12 miles of road, without calling in the help of government or any other agency. This is the kind of work that speaks well for the public spirit and good feeling of a settlement. But for the hoggishness of one or two kickers, more of this sort of work could be done all over the country.

—The monument to the late Watson Crosby, M. P. P., has been put up in the Virden cemetery. The stone is Nova Scotia granite, and the shaft on which the inscription is, is polished. It stands a little over eight feet high, and is topped by a draped urn. The shaft stands on two massive blocks of red sandstone. The workmanship is excellent.

—Old John Bunyan, of the Pilgrim's Progress, was not always dreaming. In his country rhymes, published in 1686, he has a meditation on the Horse and the Drum, in which he says:—

Let drummers beat the charge or what they will, They'll nose them, face them, keep their places still.

The reference bears on moral courage, but it is just another way of telling what the most recent horse trainer tells us. If you want a horse to be fearless of strange sights and sounds, make him familiar at home with the terrors likely to meet him abroad, and he will face the music anywhere.

—Mr. Angus Mackay, of Indian Head, in his evidence quoted in last month's Farmer, said that a homesteader ought to have 320 acres if he is to summer fallow according to the best methods, and that on 160 acres without summer fallowing a man would starve in five years, if he depended on grain. He would have to leave the country. Some of the western members maintain, on the contrary, that 160 acres is all a homesteader really needs to start him. That is quite true also, and the point to be decided is, assuming that both statements are correct, who should find the second 160 for the man who has got in full swing and wants to double his holding? Ought the country to give him that too for nothing, or does common sense not indicate that he ought to pay for it, as well as work it? If he is of any real account, he will be able to pay for it out of his crops. If not, the country is not what it is cracked up to be.

—Within the last few months some of the lovers of progress have been "figgerin' up" the profit that will come to this country when we grow enough sugar beets to make our own sugar, perhaps have it to sell elsewhere. It is very gratifying to find men always ready to lead in the path of progress, but experience has taught a good few of us the necessity of keeping our weather eye open, for fear we should be running after a will o' the wisp. Whenever the country does get so populous, if ever, as to make it feasible to put up the appliances required to convert into sugar the saccharine juices of a beet crop grown within working distance of the mill by people like the French and Germans, accustomed all their life to plodding, monotonous work for very slim pay, it will be ample time to go into the question of sugar. Quebec is a much likelier field than this, and it would not be amiss if some of our too sanguine forecasts were laid alongside their experience.



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BY MAIL.

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Our Stock of Toilet Articles,

Suitable for Christmas Presents, is larger than ever.

If You Want Anything for Yourself or a Friend, write to us,

We will be glad to give you all particulars.

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We are now running full time and hope to buy all HOGS offered. Hogs weighing 150 to 250 lbs. live weight command the highest price.

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ELEVATORS AT ALL PRINCIPAL POINTS IN MANITOBA AND NORTHWEST TERRITORIES.

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Are in the City be sure and call on

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And get what you want in

Men's and Boy's Clothing, Hats, Caps and Fur Goods,

You will find him at his old stand of 1882 (opposite Hotel Brunswick)

564 Main Street, WINNIPEG.

Notes by the Way.

"If a man gets one good crop in every three years, he is all right in Manitoba." That's what a Whitewater farmer has to say for our province.

An old subscriber of The Nor'-West Farmer, who lives at Boissevain, in renewing, says he considers the paper well worth \$5 a year. His name is T. Johnston, if you want to know.

T. Johnston, well known as one of Boissevain's most successful farmers, reports that in the past three years he has taken from a quarter section, besides a great deal of rough grain, an aggregate of \$4,100 worth of wheat. The average area of wheat crop was about 90 acres. That's not so bad.

"I do not believe there is another country on the earth where a farmer can attain such success with the same capital and in so short a time as in Manitoba." This was the remark we heard made by a farmer the other day, and is only another testimony evidencing the contentment which exists among the agriculturists of this province.

An investment which yields 100 percent, per annum is considered by most people as satisfactory. H. Coombs, of Deloraine, recently told a representative of this journal how he performed the feat, and in quite an ordinary way, too. year ago he bought a quarter section for a little over \$1,000. This season he threshed from it 1,420 bushels of wheat, which he marketed at an average of about 80 cents per bushel, receiving for the first crop enough money to entirely pay for the farm and have \$100 over to help pay for the seed and labor. We do not mention these results as anything phenomenal, but only as another illustration of the success which it is possible for a Manitoba farmer to attain by management, fair success and good prices.

Anyone who is moving about through Manitoba cannot fail to observe with satisfaction the healthful advances which are being made in every village, and some-times in the rural districts, in the way of literary instruction and entertainment. Not infrequently the debating society marks the first stage of the development. After this generally follows the public library, and thus useful information is disseminated, accompanied at the same time by a means of recreation which dispels monctony, and lends a zest to life which makes it worth the living. Few enough are the diversions enjoyed by the young people of the country, and probably there are many men in every locality whose services are less beneficial than those of the travelling magic lantern man or other respectable public entertainer.

A real estate dealer of Deloraine, in conversation with a representative of The Nor-West Farmer recently, reported a large number of deals this season, and says that land in that section of the pro-Improved vince is in great demand. farms within reasonable proximity to the market have been bringing as high ts \$18 per acre, while more outlying lands have sold from \$5 up. Many of the remaining C. P. R. and other unimproved farms are being taken up, and new settlers are continually arriving in the district. He states that a misunderstanding seems to be abroad that this part of the country without a good water supply. The illusion seems to have sprung from the fact that the 1,900 ft. well, which was sunk there some few years ago, has not been the success which it had been hoped to

have been. Notwithstanding this, however, almost every farmer finds himself blessed with a well of the purest water, and that, too, at an easy depth.

A progressive farmer remarked the other day that the agricultural classes were the most lax of any set of people in looking after much which advanced themselves and their business. Farmers' Institute as an example," said he. "Why, every other pursuit, be it ever so much less in importance, is marked by its own association and conventions, the members often going many miles to attend, but when the farmers have a meeting to discuss their work and methods, many are not interested enough to attend and lend their support. If a man knows more than his neighbors," says this phil-osophical agriculturist, "he might go and share his wisdom with his fellows, and if he doesn't know as much he might attend for his own sake." The same may also be said in other connections than the one in which it was used. We find a few men whose whole interest and concern is narrowed down to the limits of the line which bounds their farms and whose lives, no matter what their apparent success, are always failures in the fullest sense of the term.

Speaking of the most successful methods of wheat farming, a subscriber to The Nor'-West Farmer recently gave it as his opinon that on a farm receiving the attention of two men three-quarters of a section of land could generally be handled to much more advantage than half a section. He maintained that two men could prepare and sow half a section without trouble, and in the case of the smaller farm the tendency always was to put the whole amount into crop year after year, thus soon ruining the land. On the other hand, when working three-quarters of a section, they always could afford to reserve one-third of the farm for summer While we believe that every farmer should have enough sense to stop sowing when he gets the proper amount of land seeded, still it is a fact that there are some who will continue spring operations as long as possible, seeking only immediate returns and shortsightedly forgetting the effects upon crops to follow. In the case of such as these, at least, there may be much wisdom in our subscriber's remarks.

Farmers in the vicinity of Methven are in very high spirits this year as a result of the good crops they have had. The wheat crop averaged almost 20 bushels per acre, a high average for this year. It is now conceded that this is one of the sure sections in Manitoba for wheat growing. Frost has not troubled them for the past twelve years. They have always escaped twelve years. the disastrous hail storms, and as the soil is very heavy, it is not so easily injured by dry weather. Mr. McFadden, one of the most progressive farmers, threshed over 12,000 bushels of wheat this year, none of which was sold under 82c. He has also erected a handsome new frame barn, 32x64. The walls of the stable underneath are built of concrete, the mortar being mixed in the proportion of five of and gravel to one of lime. walls of the stable were built with a cash outlay of only \$26, all the work being done by competent farm hands. A large wind-mill runs the chopper and cutting box. The stable is very warm and convenient, and Mr. McFadden is justly proud of it.

J. R. O.

Preparing for Winter.

By an Eastern Visitor.

The past season has been a very busy one for the farmers of Manitoba, and perhaps this accounts for the dilapidated condition of many stables in the country at the approach of winter. I do not mean that they should all build new stone or frame buildings, because such buildings in Indeed, some Manitoba are expensive. of the most comfortable stables that I have entered have been the old-fashioned sod ones when they are in good repair. too many cases, however, boards have disappeared from the sides of stables, and the chinks and plaster have dropped from the log ones, so that the cattle are either left out of doors, or, worse still, are tied in the stables and subjected to freezing draughts. It is not the severe blizzards of mid winter from which the majority of people suffer harm. It is the milder storms in the beginning of winter, when the system is not inured to the cold or the body clothed sufficiently to protect it. In much the same way, by leaving the cattle exposed in the early part of winter, their system receives a check which no amount of good feed and care received later on can overcome. Milch cows are specially injured by this treatment, and the common cry of the milk-man about this time of the year is, "My, how the cows are drying up; they have dried up nearly one-half since yesterday." A day or two spent in banking up and repairing the stables in early fall would save many farmers much money and a great deal of anxiety and trouble.

A few years ago a question the east often asked was: "Can Manitoba support a farming community?" A person has a farming community?" A person has only to travel a short distance in the Brandon district in order to have all doubts on this score removed. On every hand are evidences of prosperity, while a wealth of hospitality, to which the people in the east are largely strangers is bestowed upon the visitor. As you sit in the cosy parlor by the side of a glowing coal stove and listen to the farmer praising with unbounded confidence the fertility of his adopted province, you soon become convinced that it is a good country to live in. This contagious spirit of hope and cheerfulness which brightens up the countenance of nearly every Manitoba farmer is one of the surest signs of the future prosperity of the country, for this same confidence and pride in the resources of their small island is the motive power which has directed the energies of the British people through the past ages to their position of world supremacy to-day.

We've got them all talking about

Fleming's New.... Condition Powders.

Do you know why?

Because they are the very best thing to feed with straw as a food for stock. They increase the value of straw as a food 25 per cent. That's a bold statement, but it's true.

25 Cents a Package, 5 for \$1.00.

Sent anywhere upon receipt of price.

FLEMING'S DRUG STORE, BRANDON.

Mail Orders for Drugs solicited.

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Hits and Misses in Fruit Growing.

By A. P. Stevenson, Pine Grove Farm, Nelson, Man.

You ask for the cream of my experience in the growing of fruit here. I must say it has been a chequered one, the "misses" being far in excess of the "hits;" but it is absolutely as essential that the latter should be as well-known, and more so, I think, than the former, as it might be the means of saving thousands of dollars to the people of our province, which annually goes out to eastern nurseries for stuff that is absolutely worthless so, to those who feel inclined to profit by the experience of one who has "Trod-den the road before them," and who do not wish to start where I did over twenty years ago, I submit the few following somewhat incomplete notes:-

To do so I will have to look far back into the years and see what "Hits and Misses" they have taught me in fruit

growing.

In the year 1876 I planted my first fruit ushes. These consisted of the wild black bushes. currant gooseberry from the surrounding woods; no tame varieties could be got, or information as to whether they would be likely to succeed if they could be pro-

Our predecessors in gardening were small parties of wandering half-breeds and Indians, and, on inquiries being made, it was clearly shown that the horticultural branch of their education had been sadly

neglected; so no hints being available in that quarter, I had to do a little experimenting of my own.

My wild currants and gooseberries got the best of care and cultivation, and two heavy crops of berries were reaped, but the following seasons the fruit of the currant was worthless, being all covered with a brown scurf or mildew, while the bushes in their wild state showed clean fruit; a few succeeding years showed the same results; then they were consigned to the brush pile, the lesson being learned that under high cultivation wild currants and gooseberries were not a success.

By this time a wandering tree pedlar from Crookston, Minn., had found his way into this settlement, and from him the first tame bushes were got, consisting of Transcendant crab apples, Houghton and Downing gooseberry, and Wilson and Crescent strawberry. That was eighteen Crescent strawberry. years ago; the lessons learned from then till now may have some interest. Taking the strawberries first, to the varieties already mentioned other new and much boomed varieties were added yearly and given a fair trial, but after all these years 75 per cent. of my plants are yet of the first varieties mentioned. Never having grown strawberries previous to 1879, books were my only sources of informa-tion. The matted bed was tried first, but the difficulty in keeping clear of weeds and handling the vines led me to abandon

The hill system and matted row were then tried. Each system has its advocates, but, all things considered, the latter

plan has been found to be the best.

To the Houghton and Downing gooseberries mentioned, such varieties as Crown Bob Smith's Improved, Greengage, Industry, Pearl, and Sulphur were added, some at fancy prices. These got every

attention and care, but with the exception of the Houghton, all have gone to the brush pile. With protection, some varieties gave a fair crop of fruit, but of all bushes that grow I have found the gooseberry the most difficult to handle in that way; so finally I gave it up.

Among red currants the cherry was the first variety planted, but it lacked in hardiness, so was soon discarded. Eight different varieties were given a fair trial, but all have been dropped except the Kaby Castle, North Star, and Stewart's Seedling. These names are given in or-

der of merit.

Fifty cents each was paid for the first tame Black Currants of the Black Champion variety, and how they did grow! Vigorous was no name for it. New wood five feet long in one season, but fruit there was next to none, and flavor rank. After a good deal of labor they were finally rooted out. A few other varieties were tried, but all discarded, except Black Naples. Four varieties of the White Currant have been tried, but nothing yet has been found superior to the White Grape.

The Cuthbert was the first tame red raspberry tried, followed closely by the Turner and the Philadelphia. The firstnamed variety requires protection to give a paying crop, so were condemned to the brush pile on that account, the two lastbrush pile on that account, the two lastnamed varieties giving good crops without that trouble, but they were poor shippers, being too soft. I am still on the
lookout for a firm, hardy berry of good
quality, and I think I have found it in the
"Sarah," a variety originated by Prof.
Saunders, of the Central Experimental
Farm, but a fuller test of this variety is
necessary. No variety of the Black Cap
raspberry family yet offered is hardy
enough to give a paying crop without
protection. Of five varieties tried, I find
the Hilborn to be the shipper, or market
berry, being firm and of good quality.

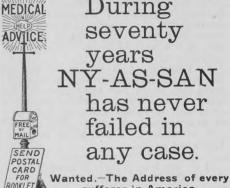
The "Older," on the other hand, gives
fine crops of large, soft, juicy berries, very
unsuitable for shipping, even for a short

unsuitable for shipping, even for a short distance, but it is par excellence the berry for home use, and I notice also that the canes are more easily managed than any of the other kinds grown here. My first crab apple trees were planted about eighteen years ago, and are perfectly sound and healthy to-day, and have carried some fine crops. Since then, thirteen different yarieties have been tried. One third of varieties have been tried. One-third of these have gone to the brush pile; the other two-thirds are with us yet and are of various degrees of promise. Transcendent, Hyslop, Virginia and Sweet Russell I now consider as being beyond the experimental stage, grown under the same

experimental stage, grown under the same conditions as at this place.

My first experience with Standard apple trees was in the year 1880. A large number of the varieties usually grown in the east were planted, but their days were few and full of trouble. All were mournfully consigned to the brush pile. Shortly after, one year old trees of the Wealthy, Duchess and Walbridge varieties were planted. The two first-named varieties The two first-named varieties are now bearing some fine specimens of fruit; the last-named variety has long since gone to the place of so many blast-ed hopes. In 1890, through the influence and good offices of Mr. R. Waugh, of the Nor'-West Farmer, a large consignment of the most hardy Russian apple, cherry and plum trees were received from Prof. G. L. Budd, of Iowa. The Central Experimental Farm of Ottawa also supplied a number of choice hardy varieties, till there were growing here 500 Russian apple trees of 90 different varieties. More

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1884

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Calville, Ostrekoff, Simbrisk No. 1, Silken Leaf, Little Hat, Lieby, and a few others. These have carried a few fine specimens of fruit, and, to say the least, are full of promise, but I would have it understood that I am unacquainted with any variety of apple tree that could be recommended for "general" planting. The above mentioned varieties are all grown in what is generally known as a favorable locality, and I am also thoroughly convinced that all apple trees, including "crabs," should have their trunks protected in winter, even although the locality is a favorable one.

The possibilities of growing good plums in our province offers a more encouraging field at the present time than the

apple.

In the year 1890 six varieties of the Russian plum were planted and all proved a decided "miss." The last of them went two years ago to increase that already large and melancholy pile of blasted hopes. At about the same time were planted a few varieties of the Improved Native plum got from Iowa. Some of these were a good hit. Worthy of mention are the Cheany, Bicksley, Rockford, and Wyant, named in order of merit. Eight teen other varieties have been planted from time to time belonging to this family, and are full of promise, but are yet too young to have an opinion passed on their merits. The first mentioned varieties have given some fine crops of excellent

In all the above nothing has been said as to the care and cultivation that should be given. That is a subject of sufficient size and importance to be treated by it-self. This paper is already too long, and I sincerely hope that some of your numerous readers, who, this coming spring, may intend planting fruit trees and bushes, may profit to some extent by my experi-ence gained at the expense of a good deal

of time and money.

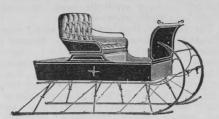
H. C. Robey, of the Brandon Experimental Farm, thus reports on the staying

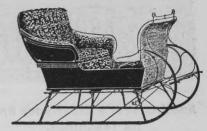
power of the trees there.—
The Dakota Cottonwood (Populus monilifera) was found to have made a larger growth than any other tree. Grown from cuttings planted in 1890, specimens measured 30 feet high with a circumference of 18 inches, two feet from the ground. Even at this size at 7 years old they would not be despised as fuel, where a journey of 20 miles and even 40 miles has to be undertaken to procure that absolutely necessary article-fuel. As to its adaptability as a fire wood, we think that it is ranked on a par with our native poplars. It will be readily seen that a few acres of these trees would be a paying crop, without speaking of the benefit derived from the shelter of such a belt running through the farms on our often wind-swept prairies. This variety grows steadily from cuttings, and even this year 80 per cent. of those planted struck, and have made a healthy growth of three feet.

Of the Russian poplars, the variety known as the Populus Wobsti Riga is the most rapid grower, and trees 7 years old measured 14 feet high with a 14 inch girth, and so far have

proved thrifty and hardy.

The Brevoensis poplar is a less rapid grower, but is much more symmetrical and handsome, and even at this late date (Oct. 12th) has its leaves almost entirely intact, whilst the maple and ash show nothing but their bare branches; but still this is late in leafing in the This tree is suitable for the high ground; when planted in low, wet places, it is not only unhealthy, but in some cases has been killed right out. As regards the longevity of the two last mentioned trees, we cannot speak with any degree of accuracy, only having tested them for nine years. In the Eastern Provinces they are found to deterioriate after about twelve years' growth, but it does not necessarily follow with our dryer climate that they will do so here.





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Another Year's Experience and Its Teachings.

By Angus MacKay, Experimental Farm, Indian Head.

In reply to your enquiry as to the results obtained from the various tests made during the past season on the Experimental Farm, I beg to send you the following as the more prominent, if not the

most valuable.

There is no part of farming in the Northwest more abused thatn that of sowing grain in the spring. Provided a farmer has land and seed, in a great many instances he knows no stopping point till both are exhausted, and let it be early in May or early in June, only when the supply of seed and land runs out is he satisfied. To find out how late grain of all sorts may be sown with safety, has been one of the chief experiments carried on each year since the farm commenced. It has been most clearly demonstrated that wheat, to be fairly safe from frosts, produce the best yields and best sample of grain, should be sown not later than May 10th to 15th. If seeding can be completed by 1st of May the risk is correspondingly lessened. There is not much danger of sowing too early provided a start is not made before the first week in April. The majority of tests week in April. during the past five years point to the second week after frost leaves the ground as the best time to sow Red Fife wheat. Other varieties are often greatly injured if sown as early as Red Fife. The past spring was late and the earliest seeding gave the best returns. Red Fife sown on April 17th, 24th and May 1st gave an average yield of 37 15-60 bushels per acressown on May 8th, 15th and 22nd the average was 31 bushels per acre. rage was 31 bushels per acre. Between the first and last seeding there was a difference of 5 50-60 bushels, in favor of early seeding, and a difference of two grades in the sample.

With oats, barley and pease, repeated

With oats, barley and pease, repeated lists show that early seeding is very dangerous on account of spring frosts and late seeding equally so from dry weather and late frosts. There seems to be a time from about the 25th April to 15th May that these three cereals should be sown to escape the dangerous points in our cli-

The past season, Banner oats, sown April 24th, May 1st and 8th, gave an average yield of 91 bushels per acre; the same grain sown May 15th, 22nd and 29th averaged 68 5-34 bushels per acre. Between first and last seeding there was a difference of 51 32-34 bushels in favor of the former the former.

Odessa barley sown on first three dates gave 72 7-48 bushels and the last three seedings yielded 61 38-48 bushels per acre.
Where protected from winds, grain

sown two inches deep gave the best yield; where exposed, seeding three inches had the advantage.

There were only a few pounds difference in yields between wheat sown at rate of 1 bushel, 14, and 1½, and 1¾ bushels per acre. The plot sown at the rate of bushel per acre gave the largest yield.

Grain sown by press-drill gave better results than that sown by hoe-drill.

seed as in former years, but bluestone did not entirely eradicate smut on seed which was badly affected.

The best yielding variety of wheat was Hungarian; oats, barley (six-rowed), American Banner; common; two-(small), Golden Vine; (large), Potter; corn, Giant Prolific Ensilage; turnips, Hartley's Bronze; mangels, Gatepost; carrots, improved short white; sugar beets, Danish improved; Potatoes, Lee's Favorite; cabbage Ruppea's Chevalier; rowed. French pease gar beets, Danish improved; Potatoes, Lee's Favorite; cabbage, Burpee's all head; cauliflower, selected early Erfurt; celery, red Pascal; beet, Arlington's Favorite; (they best beet, Simmer's extra early); onions, large yellow Danvers. The earliest garden pea was Eclipse, the best Daisy. The earliest tomato was the "Earliest of All," the best Early Atlantic, The most striking result obtained on

The most striking result obtained on the farm the past season was from the use of windbreaks of maple trees as a protection for grain crops. A windbreak extends along the whole of the west boundary, and beside this the best plots of oats, barley and peas were grown. Up to about 400 feet from the trees wind did little or no harm to the grain, but beyond this the plots sustained more or less in-jury, one plot of oats being entirely destroyed, necessitating re-seeding. Banner oats near the shelter belt yielded nine bushels on one-tenth of an acre; the same variety from the same seed on similar land, exposed, yielded only 5 7-34 bushels. One variety of peas under protection gave 5 7-60 bushels on one-tenth of an acre; the same variety exposed yielded 3 25-60 bushels. The barley plots, not protected, suffered in almost the same The windbreak is on an avproportion. The windbreak is on an average 12 feet high, and apparently protects about 33 feet for every foot of its height. The wheat plots suffered no injury, as they were on a field protected on three sides by trees.

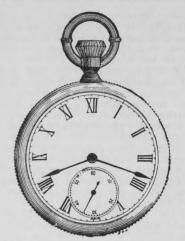
In no year in the history of Northwest farming have the effects of good farming been more apparent than during the sea-son, just past. Leaving out this district, where a large quantity of rain fell in June, ensuring a good crop, whether land was worked well or not, and taking sections where the rainfall was below the average, good farming, and more especially early and well-worked fallows, were very noticeable. In the early years of farming in this country, a season like the past would, in many sections, have caused a total failure of the grain crop, and there is not a doubt that better farming was the salvation of this year's crop in many districts throughout the Territories. On the Experimental Farm summer fal-

lows again gave the largest yields, but the difference was not so noticeable as in former years, the heavy rains in June providing sufficent moisture for crops on either fall plowing, spring plowing, or stubble land, seeded without being plowed.

A good deal of discussion with regard to Awnless Brome grass (Bromus Inermis) is going on not only in the Territories and Manitoba, but in many States of the Union to the south. It is spoken of very highly for States like Kansas, where it thrives under the hot, dry conditions are well as with the and in the ditions, as well as with us, and in all probability it will be found to be the variety best suited for cultivation throughout the continent, certainly for the western half of it.

It is too early since the introduction of Brome grass, to state with any degree of certainty how the grass should be grown to produce the best results, but from this year's experience I am led to believe that Grain sown by press-drill gave better results than that sown by hoe-drill.

The bluestone treatment as a preventive of smut was quite as effectual on ordinary



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how easily the seeds germinate, the large quantity of seed that can be grown per acre, and the large amount of rich fodder that can be secured the first year, these objections should have no weight.

In addition to getting the largest quantity of hay by growing for two cuttings only, there is the very great advantage of having the roots of this grass available as a protection from winds blowing the top soil off a field, and this may yet be found to be one of the most valuable qualities of this grass, good though the others

Brome grass on the Experimental Farm gave a fair crop of hay the past season. On one portion of a field of first crop grass the yield was over three tons per acre, dryer portions of the field gave considerably less. The whole field, 22 acres, yielded 39½ tons. Two fields, containing 22 acres, from which two or three crops have been taken, gave 26 1-10 tons.

Plots of 11 acres each of Agropyrum Tenerum and Agropyrum Caninum gave good crops. The former yielded two tons, 1,764 lbs. per acre and the latter two tons, 400 lbs. Neither of these varieties are eaten by stock as readily as Brome

The root crop was very poor, indeed, on the farm the past year. Dry weather during and after seeding was the cause. The seed remained in the ground for over a month before germinating, and the season was then too short to produce a crop. In former years early sowings gave the best returns. This year late sowings were ahead.

Trees and shrubs did better last season than ever before, and it seems only a matter of time till the Northwest will have many varieties to clothe its prairies and beautify its homes. Commencing on the Experimental Farm a few years ago with the native and a few introduced varieties, the list has been increased to nearly 200 varieties of trees and shrubs that are sufficiently hardy to stand our climate, and, as years pass, no doubt many other sorts will be added.

American cottonwood left all other forest trees far behind this season in growth upward and in growth of body-wood. Among the shrubs Lilacs, Caragana Arborescens and Tartarian Honeysuckle hold first place for hardiness, growth and beauty. Lonicera Alberti is also hardy,

pretty, and very fragrant.

In fruit culture apples were a decidedly small crop, but prospects are bright for the crab varieties. The same may be said of plums and cherries. Last season a few trees of native plums bore fruit, and blossoms were abundant on improved forms of native varieties, but were killed

by frosts in May.

Currants are decidedly the best crop the Northwest farmer to cultivate. Raspberries, gooseberries and strawberries may do with those having time to grow them, but currants will thrive with the least possible attention, and produce a good crop each year, with rare excep-tions. The crop of currants the past sea-son was excellent. Raspberries bore well, but only about one-half the fruit matured, the balance being dried up. Gooseberries were few. but large and of good quality, while strawberries gave the usual poor crop.

Mr. Mackay's attention having been called to a point referred to on page 193, in June issue of The Farmer, he says:— "The peas did very well on the brome sod so far as growth of straw was concerned, but the seed did not germinate until June 20, and the crop was frozen before it had time to ripen. The straw was 21 feet long, well-podded and wellfilled, and promised a yield of 20 to 25 on summer fallow bushels per acre. The sod was plowed 6 ripen lots of seed.

inches deep and the peas sown by hand, harrowed and rolled. The sod was plowed on May 18 and sown on 20th, and just one month elapsed before a plant appeared above ground. The same land was plowed this fall. Where the two seams in centre of land came together the grass roots were not entirely killed, but on balance of plot there was no grass living.

Another year sod will be plowed about May 1 and peas sown from May 1 to May 5, when I am satisfied good results will

be obtained.

Mistakes in Farming.

Address by S. A. Bedford, Brandon.

The first meeting for the winter of the Brandon Institute was held on Dec. 4th. The attendance was excellent, and the subject for discussion was "Mistakes in Farming." The address was by Mr. Bedford, and the after discussion showed that the mistakes referred to have been more or less frequently made by very good farmers everywhere. Some of the mistakes were natural in a country where nobody had previous experience worth speaking of, and even yet the same mistakes are made by people who do not avail themselves of what experience more or less dearly bought, has taught those who are willing to learn not only from their own blunders but from the blunders made by other people. Some of the experiments at Brandon have been made for the express purpose of proving that the methods still followed by some the methods still followed by some people are bad, and blundering examples of farming. The blunders enumerated by Mr. Bedford in his address do not exhaust the list, but they are of importance enough to deserve careful study, and so warn others off the same ground. Mr. Bedford says :-

The impression prevails with many here that a government official should be perfect in every respect. It is all right and proper for a person in private life to commit error, but entirely wrong for an official to do so. But I claim to be no more exempt from blunders than the private in-dividual; in fact, I will go further and say that we often make apparent blun-ders on the experimental farm for the special purpose of teaching a lesson, and some of our most impressive lessons have been learned that way. I give a list, not quite complete, of the errors nearly all of us have at one time or other committed, and some, I fear, are committing still. We repeat some of these errors on the farm just to show what they cost to

the men who make them.

ERRORS IN PLOWING.

1. Not cultivating fallow. Without sub-sequent surface cultivation in the shape of harrowing this kind of work is not worth calling fallow.

2. Attempting to plow fallow This dries out and loosens the soil, so as to almost unfit it for wheat growing.

3. Plowing too deep at one time, especially in spring. In fall, or as a part of the process of summer fallowing, deep plowing is all right, but an inch, or, at most, two, is enough new soil to bring once.

4. Burying weeds with seeds on them. Those seeds, even if apparently green, will ripen in every dry summer, and it only half the plant is covered the top half will ripen all its seeds in due time,

5. Harrowing fallow too late. Harrow every day as your plowing goes on, to keep the moisture in the ground and help to germinate foul seeds, to be killed by a round or two later on.

6. Not harrowing late enough. This last fall I fear lots of the weed growths on summer fallow have been allowed to

This has a very 7. Plowing crooked. bad effect on the seeding, looks very slovenly, and is a sure mark of a slipshod workman.

8. Plowing too shallow. Mere blackening of the ground is not worth calling

cultivation.

9. Breaking up the prairie too late in the year. The roots to let to let to deep. This also is the year. The roots do not rot, and cause

10. Breaking too deep. Tagainst the rotting of the sod.

11. Not backsetting at all. This, except on scrub land, which may do best with one deep plowing, is a very unprofit-

able kind of economy.

12. Backsetting too late. Before and not after harvest is the right time for the

best results.

ERRORS IN SEEDING.

1. Sowing with broadcaster on old land. This is not always objectionable on new land, but is a very bad practice on old land, where the mould has got fine.

2. Sowing poor, dirty or smutty seed.

3. Sowing too thick.

4. Sowing too early or too late. It is not always easy to hit the best time, but every year's experience, both on our farms and elsewhere, shows there is a limit before or after which the risk of poor crops

5. Plowing in seed too deep. Toward the end of the season, when the weather gets hot and dry, it may be better to plow in than to seed with the drill, but to bury seed deep in the forepart of the seeding period, when the land below is cold, is a very bad practice, indeed.

ROOTS AND HOED CROPS.

1. Letting weeds grow before starting to hoe. The earlier all weeds are dealt with the better, especially annuals.

2. Trying to grow roots on spring-plowed stubble. This practically fore-dooms the crop to failure.

3. Use of imperfectly rotted manure

for roots.

Leaving mangels out too late. Nearly the whole of this year's crop got so spoiled by one night's frost as to be unfit for storage over the winter.

HAYING.

1. Cutting too late.

2. Curing too little, causing after-heating, and too much, which takes all the flavor out of it.

3. Binding green cut oat sheaves too tight, which causes rot in the heart of the sheaf, or too large, which leads to the same result.

MISCELLANEOUS ERRORS.

Letting threshing outfits go across the fields, and so scatter foul seeds on clean Dropping the first row of sheaves on fallow when that happens to be alongside, leads to the same result. Stacking in the field is another way to get a nestful of bad seeds that will show ten years after. All the places where threshing was done on the farm ten years ago still themselves out in the same way. To have an acre of grass in each 40 acres, and do all the threshing on that is one way to hold this trouble within bounds.

Allowing pastures to run out. This was done on the farm. What was broken, up and re-seeded made nine times the hay

yield of the unbroken.

Last, but not least, lending to careless

neighbors

Mr. McKellar was chairman of the meeting, and promises to be a most efficient president. In the discussion that followed, Messrs. Wm. and H. Nichol, Wm. Middleton, C. Doran and others took part. giving valuable examples of their own experience along the same lines. Professor McKee and his students, as well as several strangers, were present at the meet-

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of Rheumatism has doubtless been caused by improper care of the feet. To insure health the feet must be kept dry and warm.

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Arthur Congdon,
Winnipeg.

Sole Agent for Canada.

The Agricultural Show.

The new government of the Territories seem determined to make the shows do better work for the country than is the case now. Mr. Haultain, at Moose Jaw, said: "Something must be done to make agricultural societies, or some institution of the kind, do more profitable work. He did not wish to say a word against the work of the existing agricultural societies. They were like almost everything else undertaken in this country,—they were undertaken by public spirited men, but at a time and under circumstances not favorable to the work they were primarily intended to do. He thought that the effort and expenditure in connection with a large number of the small shows now being held should be replaced by some concentration which would lead to greater benefit. Let them have something like district shows. This matter had not been discussed by himself and colleagues except in the most general way; but it was a question which must be dealt with at the approaching session."

Eleven thousand acres of land changed hands in the vicinity of Melita in one week recently.

The C. P. R. have reduced the wheat rate on out-going freight from Fort William east from 28 to 20 cents.

At a recent prize competition for Swede turnip-growing, open to the south of Scotland and north of England, the prize lot weighed $44\frac{3}{4}$ tons to the acre.

At Lauder, in the south of Scotland, an acre of first prize potatoes made 13\(^3\) tons, and last year in the same district made the wonderful record of close on 21 tons of 2,000 lbs.

In his address before the Farmers' National Congress at Minneapolis, Col. Liggett said: "Out of 135 graduates of the Minnesota Agricultural School, only two had backslided, one being a lawyer and the other a minister."

At Le Seur, Minnesota, a number of prizes for boys' plowing, with new Deere sulkies, was offered at the county fair. The 1st prize was won by a 7-year-old, who took 2½ days to do five acres. The next went to an 8-year-old, who plowed eight acres. A boy of 11 plowed 50 acres, but the judges favored the youngest.

John Rice, who recently had a compound fracture of his right leg while go after which another meeting will be called.

ing down hill with a load of hay, near Silver Creek, should "take the cake" for a run of bad luck. Some years ago he sustained fractures of both arms, later his leg was broken near the hip and two ribs were fractured. Last year he was hailed out.

Professor Craig, of the Wisconsin Experiment Station, has resigned his office to go sheep-breeding in that State, and is now in Ontario buying up stock to start with. Clover as pasture and hay and rape as summer feed will be his principal reliance as feed, and he will fatten lambs for the Chicago markets. He was well-known years ago from his connection with the Canadian Live Stock Journal. He has since been engaged as Live Stock Professor at the Iowa State station.

Co-operative farming is to be tried in Assiniboia. Application has been made to incorporate a joint stock company, under the title of the Harmony Co-Operative company, at Harmona, Assa. The object of the company is to acquire lands to build homes for the members, to produce from their industry sufficient to insure them against want or the fear of want to own and operate factories, mills, stores, etc., to provide educational and recreative facilities of the highest order, and to promote and maintain harmonious social relations upon the basis of co-operation for the benefit of the members, and mankind in general. The proposed capital is \$10,000, in 25 shares of \$400 each.

A numerously attended meeting has been held at Dominion City to discuss the profit of putting up a farmers' elevator there. Mr. Wynn, from Alexandria, made a statement of the experience of farmers there in the same line for the last six years. They put up a \$10,000 elevator, with \$4,000 subscribed capital, borrowing \$6,000, which they had nearly paid off, and that this year they expected to clear their debt right up, besides which the farmers had the best market in the province for the wheat, and were sure of getting their weight and grades. The other elevators had tried to boycott them the first two years, but found it no good, and now they had seven independent buyers buying through the Farmers' Elevator. Their elevator was a success right from the first, and did now, after being up six years, more business than the other three elevators. After considerable discussion, a committee was appointed to collect a list of intending shareholders, after which another meeting will be called.

Statistics show that the average cost of raising an acre of wheat in New England is about \$20; in the Middle States, \$13; Southern States, \$11; Western States, \$11; Mountain States, \$16; Pacific States, \$12. The average cost for an acre of corn, \$11.71.

The agricultural colleges of Ontario and Minnesota will this winter be over-crowded, because it is every year becoming more clear that besides skill as a workman, the modern farmer needs to learn the reason of things from the best teachers procurable.

Japan is one vast garden, and as you look over the fields you can imagine they are covered with toy farms, where the children are playing with the laws of nature and raising samples of different kinds of vegetables and grains. Everything is on a diminutive scale.

W. P. Smith, who is now settled at China, north of Austin, has purchased a stumping machine and announces it a thorough success. This is a machine which is badly needed. Stumps that have been so long a source of hardship to eradicate can now be taken out with the greatest ease by this machine, and the work can be taken up when nothing else is pushing.

How to clean out thistles is a problem that is always turning up. To prevent them from forming green leaves in the growing season will weaken them so that any quick growing crop, such as barley sown on top, will choke them down. Jas. Steele, Clearsprings, says that he has entirely given up summer fallowing as a means to kill them. For one thing, it produces a heavy growth of straw and poor wheat, a very likely result on that class of soil. He plows in the fall and plows again in the spring, seeding at once. That, in his experience, is a sure cure.

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Cattle Impounded.

Commencing with this issue, and continuing each issue thereafter, The Nor'-West Farmer will publish a list of animals impounded in Manitoba, together with a description of same, and would request poundkeepers in the different municipalities to send in notices as early as possible, for which no charge will be made, believing it to be in the interest of our readers to have same published in compact form. Animals lost or found will be inserted for subscribers free of charge, if description does not exceed three lines. If over three lines, 15 cents per line will be charged. Following is a list which have been impounded since Nov. 10:—

Municipality of Turtle Mountain, Pound Section 32, Township 2, Range 18 W.—One heifer calf, color roan, about eight months old. H. T. Jones, Lyonshall.

South Springfield, Pound No. 1, Montavista— One heifer, color black and white, with no visible marks, two years old. A. Gibson, Poundkeeper.

Municipality of Springfield—One yearling steer, with white blotch on forehead, with a few spots on belly, tail half white; one yearling heifer, color red, with spotted head, with white under belly, piece cut out under left ear; one yearling steer, color red and white, slit from under right ear; one yearling heifer, color black, with white star on forehead, four legs and belly white, and right ear partly off, point of horns broken; one heifer, color roan, two years old, mostly red about the neck. M. Ross, Cook's Creek.

Municipality of Woodlands, Pound on Sec. 23, T. 13, R. 3 W.—One steer, color reddish grey, 2 years old, branded O on left hip, tail cut square, white under belly, and horns short and thick; one yearling heifer, color red, branded O on left side and a piece cut out of the left ear; one yearling steer, color red, with a piece out of the bottom of the right ear. A. McMillan, Poundkeeper.

Municipality of St. Paul's, Pound No. 2—One ox, color red, 9 years old, both horns broken, branded D C on right hip; also one ox, color red and white, 9 years old, branded on right hip (brand not visible); also one yearling steer, color roan, point of left ear cut off; also two spring helfer calves, color red and white, no marks visible. J. McBeth, Poundkeeper.

Municipality of Woodlands, Pound Sec. 32, T. 14, R.I.W.—One steer calf, color red and white early calf; one heifer calf, color red, small. J. Procter, Poundkeeper.

S. E. 1-4 Sec. 17, T. 13, R. 7 W.—One horse, color black, about 3 years old; also one mare, color bay, with circle branded on left shoulder, two white feet, and white strip on forehead. D. W. McCuaig, Poundkeeper.

N. E. 1-4 Sec. 34, T. 10, R. 4 E., Suthwyn— One yearling heifer, color light bay, small white spot on forehead, white on the end of tail, white belly and short horns. P. K. Dickson, Poundkeeper.

E. 1-2 Section 7, T. 5, R. 3 W.—One mare, color bay, with nigh hind foot white, white star on face and short mane, which has been clipped, about 2 years old. Wm. F. Fife, Poundkeeper.

S. E. 1-4 Sec. 17, T. 13, R. 7 W.—One horse, color dark brown, white strip on forehead, four white feet, about 4 years old. D. W. McCuaig, Poundkeeper.

St. Boniface—One cow, color white and red, about 4 years old, with end of left horn cut, both ears short; one heifer, color red and white, 2 years old, without any visible mark. Lig. Gagne, St. Boniface.

Se qr. of Sec. 17, T. 13, R. 7 west 1st P. M.—One bull, color dark red, 1 1-2 years old. D.W. McCuaig, Poundkeeper.

Municipality of Rosser, Pound No. 4, on Sec. 16, Tp. 12, R. 2 east.—One mare, color grey, about 4 years old, brand indistinct, slit in nigh ear; one mare, color grey roan, about 4 years old, brand indistinct, cut on off front foot; one mare, color roan, about four years

old, no brand visible; one cow, color brown, aged, two cuts on off horn; one steer, color brindle, about 2 years old; one steer, color red, yearling. J. W. Phipps, Lillyfield P. O.

Municipality of Macdonald—One pony, color bay, left hind foot white, white spot on face, white nose, 18 months old, no brand; one mare, color grey, one eye out, 6 years old, no brand; one steer, color red and white, 18 months old, no brand; one colt, color red and white, six months old, no brand. A.Lalonde, Poundkeeper.

Kildonan East—One yearling heifer, color red, branded S on right hip; one yearling steer, color red, slit on right ear. A. Henderson, Fernton P. O.

Municipality of Pipestone, Sec. 33, T. 9, R. 26—One horse, color bay, about 7 years old, white star on forehead and white nigh hind foot, weight about 900 lbs. J. Sheare, Poundkeeper.

Springfield Municipality, South Millbrook Pound—One steer, color red and white, 2 years old. F. Laurie, Poundkeeper.

South Springfield Pound, Montavista—One cow, color red, with white spots, right horn turned down and point broken off; branded on left horn SS, piece cut off point of left ear. Also one yearling steer, color red, piece cut off top sides of both ears. Alex. Gibson, Poundkeeper.

Municipality of St. Francois Xavier, St. Eustache Pound—One heifer, color red, white spot on forehead, also small white spot on left side, 2 years old; one heifer, color red, white spot on forehead, hole in right ear close to head, white spot on chest, 1 year old; one heifer, color red, left ear split, 1 year old. P. Paul, Poundkeeper.

Municipality of St. Paul, Bird's Hill Pound— One steer, color dark brown and white, 2 years old, slight cut on left ear. A. B. B. Garven, Poundkeeper.

Portage la Prairie—Two steers, 3 years old, branded S on right shoulder; also two heifers, branded S on right shoulder, 3 years old. Geo. Bugg, Portage la Prairie.

Municipality of Glenwood—One pony mare, color bay, short tail, white stripe on face, right front foot white, right hind foot white, about eight years old. John Cherry, Souris.

Municipality of Woodlands, Pound No. 4.—One yearling steer, color roan, red neck, white star on forehead, wire in right ear. H. Marchant, Poundkeeper.

Municipality of Rosser, Pound No. 1, S.W. 26, 12, 1W-One mare, color bay, white spot on forchead, small white spot on nose, aged; also one small pony colt, color black, white stripe on face, right hind foot white, two years old. Jo Haddows, Poundkeeper.

Municipality of Arthur, Sec. 16, 3, 26.—Six merino ewes, two lambs with black faces and long tails. The six ewes have different marks on ears. George W. Jennings, Melita.

Municipality of St. Paul, Pound No. 2.—One steer, color red, three years old, branded T on left hip; one cow, color red and white, very old, small hole in the right ear. J. McBeth, Poundkeeper.

Pound No. 2, S.E. qr. 25, tp. 12, rge. 2 W.— One bull, color red and white, one year old, with piece cut off each ear. J. Jones, Attwell. Prairie Grove.—One steer, color red and white,

with four white legs, rising two years old. W. Arbuthnot, Poundkeeper.

Municipality of Ritchot.—One heifer, color white, about 16 months old, split in left ear. James Christie, Glenlea.

Municipality of Wallace, Elkhorn—One steer calf, color red. J. Caldwell, Poundkeeper.

Municipality of St. Andrews, Clandeboye.— One yearling helfer, color red, white belly, white hind feet, white spot on face. Wm. McRae, Poundkeeper.

Municipality of St. Paul, Pound No 5.—One mare, color bay, about three years old, badly cut with barb wire on right shoulder. A. Pritchard, Middlechurch.

Kildonan East Pound.—One heifer calf, spotted black and white, about one year old, split on right ear; one heifer calf, color dark red, cut on top of both ears, about one year old. A. Henderson, Fernton.

Elkhorn Pound.-One heifer, color red, with

white spots, about two years old. J. H. Cavanagh, Poundkeeper.

Municipality of Springfield, Township of Plympton.—One heifer, color red, one year old, slit in right ear; one heifer, color black, one year old, no marks; one heifer, color red and white mottled, one year old; one steer, color red, one year old. D. Ferguson, Poundkeeper.

Village of St. Norbert.—One heifer, color dark gray, white belly and white tail, bottom of hind legs white, about one and a half years old; one heifer, color red and white, no mark, about one and a half years old. J. Gosselin, St. Norbert.

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Have you read our "Prize Competitions" offers on the editorial page of this issue?

Send in your subscription and take advantage of our premium offers or clubbing rates.

"Only nervous" is a sure indication that the blood is not pure. Hood's Sarsaparilla purifies the blood and cures nervousness.

The machinery and assets of the Vulcan Iron Works, Winnipeg, have been purchased by Mr. John McKechnie, who will in future carry on the business.

For a trifling sum you can have a nice table bouquet of cut flowers sent you, to adorn your table on Christmas Day, by writing the Fort Rouge Greenhouses, Winnipeg.

F. W. Brown, of the Plain View Stock Farm, Portage la Prairie, is offering for sale some choice young Berkshire swine at reasonable rates. Drop a post card for prices.

Read the offers made in our Clubbing List elsewhere in this issue and order your winter's reading through The Nor'-West Farmer, thereby saving considerable money.

Are free from all crude and irritating matter. Concentrated medicine only. Carter's Little Liver Pills. Very small; very easy to take; no pain; no griping; no purging. Try them.

R. A. Lister & Co., Winnipeg, dealers in all kinds of dairy machinery and supplies, have for sale a choice herd of five pedigreed Ayrshire cows. This firm also buys dairy produce.

Dick, Banning & Co., Winnipeg, have several good farms for sale throughout Manitoba at reasonable rates. If you are after a farm, write them, not forgetting to mention The Nor'-West

If you had taken two of Carter's Little Liver Pills before retiring you would not have had that coated tongue or bad taste in the mouth this morning. Keep a vial with you for occasional use.

We would like to get a few copies of the October, 1897, issue of The Nor'-West Farmer. Any person having a copy and not wishing to keep it for reference, will confer a favor by mailing it to us.

The Portage and Lakeside Agricultural Society have selected the 18th of July next as the opening date of the Portage Summer Fair, continuing three days, following immediately after the Winnipeg Industrial.

There is offered for sale in the advertising columns of this issue, a 3-year-old Avrshire bull, the property of Thos. Byrne, Winnipeg.

"D. W. Fleury" was a familiar sign in the old days of Winnipeg. It is now to be seen again at 564 Main street, where he is catering to the wants of those requiring anything in men's and boys' clothing, hats, caps and fur gonds

Dealing with a reputable house, you don't take any chances buying furniture by mail. Leslie Bros., Winnipeg, will send their catalogue to any address on application, which contains illustrations and descriptions of their goods, with the prices.

Any of The Farmer's readers in quest of Shorthorns, with reliable pedigrees, will do well to correspond with John S. Robson, Thorndale Stock Farm, Manitou. He has young stock of both sexes always on hand, and will be pleased to reply to your wants.

The Fairchild Co. Ltd., Winnipeg, inform us that it is with difficulty they can get their present orders for sleighs and cutters filled. They are doing a very large trade, but hope in a few days to be able to fill all orders as soon as received. Write them for what you want in the carriage, sleigh or implement line. They sell good goods, and at prices that will satisfy.

Threshermen, your engine is a hundred times better off if you keep it running. Why store it up for ten months out of the year, and pay interest on that, when by investing a little more you make your idle engine turn in money? Correspond with the Waterous Engine Works Co., Winnipeg; they will help you out, and don't forget to mention seeing their ad. in The Nor'-West Farmer.

No western man would be adjudged to possess business ability who would enter into agreement to send his capital to any eastern loan agent or company for the purpose of accumulating it at the lower rate of interest, when he can lend it at home on better security and at the higher rate. Insurers in the Great-West Life have their money invested in western securities by western men well acquainted with western investments.

Clougher, who has been running a farm of over 800 acres near St. Jean, has sold to Mr. Clark, formerly of Middlechurch. who, with his four sons, will work the place. At the auction sale of stock, implements, etc., which was advertised as being a credit sale, the sum of \$1,500 was paid in cash, the balance being short date paper, and Mr. Clougher informs The Farmer that had he given the usual percentage off for cash, he is of opinion the whole amount would have been paid.

To Breeders and Owners of Horses.-Gentlemen-It is with pleasure that I testify to the value of the Eureka Veterinary Caustic Balsam as an application in the treatment of spavins. I had occasion to see it tested thoroughly, and I am satisfied that it excels any remedy that I ever saw used. Four applications cured the horse of his lameness, and reduced the enlargement considerably. It acted quickly, caused extensive swelling of the parts, but did not injure the hair or leave the slightest scar or blemish. Therefore, I cheerfully recommend it to the public as being a reliable remedy. Yours truly, F. B. Leys, President of the Western Fair, London, Ont.

The demand for the "T. & B." tobacco is still on the increase, and from every quarter the firm who make it are receiving unsolicited testimony of its growth in public favor. A gentleman from one of the mining islands of Lake "Your 'T. & B.' is an invalu-Huron writes: able solace to the loneliness of the miner's life. I don't know how our men could get along without it. If their stock ran out they risk swimming to the mainland to replenish it, heedless of danger, and I believe they would cross the ice in winter on the same errand, if it was not more than an inch thick. No other tobacco will satisfy them."

Of Interest to Horsemen.-Do you turn your horses out for the winter? If so, we want to call your attention to a very important mat-Horses that have been used steadily, either on the farm or for road work, quite probably have some strains whereby lameness, or enlargements have been caused, or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horse out, will be of great benefit, and this is the time when it can be used very successfully. great advantage in using this remedy is that after it is applied it needs no care or attention, is absolutely a safe remedy for any one to use and does its work well, and at a time when the horse is having a rest. Of course, it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this is given as a reminder.

For Over Fifty Years

MRS. WINSLOW'S SOOTHING SYRUP has been used for over fifty years by millions of mothers for their children while teething, with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for Diarrhoæa. It will relieve the poor little sufferer immediately. Sold by Druggists in every part of the world. Twenty-five cents a bottle. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind.



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remedy. The plague is rapidly spreading and it will only be stamped out when this remedy is universally used to combat it.

Lump Jaw is contagious and a single case among your stock may infect your herd and your pastures.

The remedy is easily used, applied externally, and one to three applications cures.

THE GUARANTEE Every bottle is sold that if it fails your money is to be returned. The record thus far shows three failures only in each thousand cases.

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Prize Competition for Ladies.

Nor'-West Farmer will monthly, for the present, a handsome Fancy Leather Purse, with name printed thereon in gilt letters, to the competitor who sends us by the 20th of each month the most instructive letter on any topic suitable for our "Household" readers. Competitors must be females, and on the top left-hand corner of the envelopes containing the letters must be written the word "Household." The prize will not be awarded to the same person twice. Address, The Nor'-West Farmer, Box 1310, Winnipeg, Man.

Empty Stockings.

Oh, mothers in homes that are happy Where Christmas comes laden with cheer, Where the children are dreaming already Of the merriest day in the year,

As you gather your darlings around you And tell them the "story of old," Remember the homes that are dreary! Remember the hearts that are cold !

And thanking the love that has dowered you With all that is dearest and best, Give freely, that from your abundance Some bare little life may be blessed!

Oh, go where the stockings hang empty, Where Christmas is naught but a name, And give-for the love of the Christ-child! 'Twas to seek such as these that He came.

-Ladies' Home Journal.

Cranford.

We have much pleasure this month in introducing to our readers a widely read English classic, one of the most genial stories of English life in a quiet country town, or rather village, that has ever appeared in print. It is by Mrs. Gaskill, one of the favorite authors of the middle of the Victorian era. She was at the height of her popularity between 1850-60 and Cranford was her masterpiece, and deservedly popular, for the delicate and sympathetic way in which she depicts the life and characters she places on her canvas. It has been many times reprinted, both in England and the States, and we trust that as a serial in our columns it will contribute highly to the entertainment of the winter evenings of the many farm homes where The Farmer is a regular visitor.

CHAPTER I. OUR SOCIETY.

In the first place, Cranford is in possession of the Amazons; all the holders of houses, above a certain rent, are women. If a married couple come to settle in the town, somehow the gentleman disappears; he is either fairly frightened to death by being the only man in the Cranford evening parties, or he is accounted for by being with his regiment, his ship, or closely engaged in business all the week in the great neighboring commercial town of Drumble, distant only twenty miles on a railroad. In short, whatever does become of the gentlemen, they are not at Cranford. What could they do if they were there? The surgeon has his round of thirty miles, and sleeps at Cranford; but every man cannot be a surgeon. For keeping the trim gardens full of choice flowers without a weed to speck them; for frightening away lit- Forrester, for instance, gave a party in her slights, and omissions of trivial ceremonies, with

tle boys who look wistfully at the said flowers through the railings; for rushing out at the geese that occasionally venture into the gardens if the gates are left open; for deciding all questions of literature and politics without troubling themselves with unnecessary reasons or arguments; for obtaining clear and correct knowledge of everybody's affairs in the parish; for keeping their neat maid-servants in admirable order; for kindness (somewhat dictatorial) to the poor, and real tender good offices to each other whenever they are in distress,-the ladies of Cranford are quite sufficient. "A man," as one of them observed to me once, "is so in the way in the house !" Although the ladies of Cranford know all each other's proceedings, they are exceedingly indifferent to each other's opinions. Indeed, as each has her own individuality, not to say eccentricity, pretty strongly developed, nothing is so easy as verbal retaliation; but, somehow, good-will reigns among them to a considerable degree.

The Cranford ladies have only an occasional little quarrel, spirited out in a few peppery words and angry jerks of the heads: just enough to prevent the even tenor of their lives from becoming too flat. Their dress is very independent of fashion : as they observe : " What does it signify how we dress here at Cranford. where everybody knows us ?" And if they go from home, their reason is equally cogent, "What does it signify how we dress here, where nobody knows us ?" The materials of their clothes are, in general, good and plain, and most of them are nearly as scrupulous as Miss Tyler, of cleanly memory; but I will answer for it, the last gigot, the last tight and scanty petticoat in wear in England, was seen in Cranford-and seen without a smile.

I can testify to a magnificent family red silk umbrella, under which a gentle little spinster, left alone of many brothers and sisters, used to patter to church on rainy days. Have you any red silk umbrellas in London? We had a tradition of the first that had ever been seen in Cranford; and the little boys mobbed it, and called it "a stick in petticoats." It might have been the very red silk one I have described, held by a strong father over a troop of little ones; the poor little lady-the survivor of allcould scarcely carry it.

Then there were rules and regulations for visiting and calls; and they were announced to any young people, who might be staying in the town, with all the solemnity with which the old Manx laws were read once a year on the Tinwald Mount.

"Our friends have sent to inquire how you are after your journey to-night, my dear," (fifteen miles in a gentleman's carriage); "they will give you some rest to-morrow, but the next day, I have no doubt, they will call; so be at liberty after twelve-from twelve to three are our calling hours."

Then, after they had called-

"It is the third day; I daresay your mamma has told you, my dear, never to let more than three days elapse between receiving a call and returning it: and also, that you are never to stay longer than a quarter of an hour.'

"But am I to look at my watch.? How am I to find out when a quarter of an hour has passed ?"

"You must keep thinking about the time, my dear, and not allow yourself to forget it in conversation.

As everybody had this rule in their minds, whether they received or paid a call, of course no absorbing subject was ever spoken about. We kept ourselves to short sentences of small talk, and were punctual to our time.

I imagine that a few of the gentlefolks of Cranford were poor, and had some difficulty in making both ends meet; but they were like the Spartans, and concealed their smart under a smiling face. We none of us spoke of money, because that subject savored of commerce and trade, and though some might be poor, we were all aristocratic. The Cranfordians had that kindly esprit de corps which made them overlook all deficiencies in success when some among them tried to conceal their poverty. When Mrs. baby-house of a dwelling, and the little maiden disturbed the ladies on the sofa by a request that she might get the tea-tray out from underneath, every one took this novel proceeding as the most natural thing in the world, and talked on about household forms and ceremonies as in we all believed that our hostess had a regular servants' hall, second table, with housekeeper and steward, instead of the one little charity-school maiden, whose short ruddy arms could never have been strong enough to carry the tray upstairs if she had not been assisted in private by her mistrees, who now sat in state, pretending not know what cakes were sent up, though she knew, and we knew that she knew that we knew, she had been busy all the morning making tea-bread and sponge cakes.

There were one or two consequences arising from this general but unacknowledged poverty, and this very much acknowledged gentility, which were not amiss, and which might be introduced into many circles of society to their great improvement. For instance, the inhabitants of Cranford kept early hours and clattered home in their pattens, under the guidance of a lantern-bearer, about nine o'clock at night . and the whole town was abed and asleep by half-past ten. Moreover, it was considered "vulgar" (a tremendous word in Cranford) to give anything expensive, in the way of eatable or drinkable, at the evening entertainments... Wafer bread and butter and sponge-biscuits were all that the Honorable Mrs. Jamieson gave; and she was sister-in-law to the late Earl of Glenmire, although she did practice such 'elegant economy."

" Elegant economy !" How naturally one falls back into the phraseology of Cranford! There, economy was always "elegant," and moneyspending always "vulgar and ostentatious;" sort of sour grapism which made us very peaceful and satisfied. I never shall forget the dismay felt when a certain Captain Brown came to live at Cranford, and openly spoke about his being poor-not in a whisper to an intimate friend, the doors and windows being previously closed, but in the public street ! in a loud military voice! alleging his poverty as a reason for not taking a particular house. The ladies of Cranford were already rather moaning over the invasion of their territories by a man and a gentleman. He was a half-pay Captain, and had obtained some situation on a neighboring railroad, which had been vehemently petitioned against by the little town; and if, in addition to his masculine gender, and his connection with the obnoxious railroad, he was so brazen as to talk of being poor-why, then, indeed, he must be sent to Coventry. Death was as true and as common as poverty; yet people never spoke about that, loud out in the streets. It was a word not to be mentioned to ears polite. We had tacitly agreed to ignore that any with whom we associated on terms of visiting equality could ever be prevented by poverty from doing anything that they wished. If we walked to or from a party, it was because the night was so fine, or the air so refreshing, not because sedan chairs were expensive. If we wore prints, instead of summer silks, it was because we preferred a washing material; and so on, till we blinded ourselves to the vulgar fact that we were, all of us, people of very moderate means. Of course, then, we did not know what to make of a man who could speak of poverty as if it was not a disgrace. Yet, somehow, Captain Brown made himself respected in Cranford, and was called upon, in spite of all resolutions to the contrary. I was surprised to hear his opinions quoted as authority at a visit which I paid to Cranford about a year after he had settled in the town. My own friends had been among the bitterest opponents of any proposal to visit the Captain and his daughters only twelve months before; and now he was even admitted in the tabooed hours before twelve. True, it was to discover the cause of a smoking chimney, before the fire was lighted; but still Captain Brown walked upstairs, nothing daunted. spoke in a voice too large for the room, and joked quite in the way of a tame man about the house. He had been blind to all the small which he had been received. He had been friendly, though the Cranford ladies had been cool; he had answered small sarcastic compliments in good faith; and with his manly frankness had overpowered all the shrinking which met him as a man who was not ashamed to be poor. And, at last, his excellent masculine common sense, and his facility in devising expedients to overcome domestic dilemmas, had gained him an extraordinary place as authority among the Cranford ladies. He himself went on in his course, as unaware of his popularity as he had been of the reverse; and I am sure he was startled one day when he found his advice so highly esteemed as to make some counsel which he had given in jest to be taken in sober, serious earnest.

It was on this subject: An old lady had an Alderney cow, which she looked upon as a daughter. You could not pay the short quarterof-an-hour call without being told of the wonderful milk or wonderful intelligence of this animal. The whole town knew and kindly regarded Miss Betsy Barker's Alderney; therefore great was the sympathy and regret when, in an unguarded moment, the poor cow tumbled into a lime-pit. She moaned so loudly that she was soon heard and rescued; but meanwhile the poor beast had lost most of her hair, and came out looking naked, cold, and miserable, in a bare skin. Everybody pitied the animal, though a few could not restrain their smiles at her droll appearance. Miss Betsy Barker absolutely cried with sorrow and dismay; and it was said she thought of trying a bath of oil. This remedy, perhaps, was recommended by some one of the number whose advice she asked; but the proposal, if ever it was made, was knocked on the head by Captain Brown's decided "Get her a flannel waistcoat and flannel drawers, ma'am, if you wish to keep her alive. But my advice is, kill the poor creature at once."

Miss Betsy Barker dried her eyes, and thanked the Captain heartily; she set to work, and by and by all the town turned out to see the Alderney meekly going to her pasture, clad in dark gray flannel. I have watched her myself many a time. Do you ever see cows dressed in gray flannel in London?

Captain Brown had taken a small house on the outskirts of the town, where he lived with his two daughters. He must have been upwards of sixty at the time of the first visit 1 paid to Cranford after I had left it as a resident. But he had a wiry, well-trained, elastic figure, a stiff military throw-back of his head, and a springing step, which made him appear much younger than he was. His eldest daughter looked almost as old as himself, and betrayed the fact that his real was more than his Miss Brown must have been apparent age. forty; she had a sickly, pained, careworn expression on her face, and looked as if the gayety of youth had long faded out of sight. Even when young she must have been plain and Miss Jessie Brown was ten hard-featured. years younger than her sister, and twenty shades prettier. Her face was round and dimp-Miss Jenkyns once said, in a passion against Captain Brown (the cause of which I will tell you presently), "that she thought it was time for Miss Jessie to leave off her dimples, and not always to be trying to look like a child." It was true there was something childlike in her face; and there will be, I think, till she dies, though she should live to a hundred. Her eyes were large blue wondering eyes, looking straight at you; her nose was unformed and snub, and her lips were red and dewy; she wore her hair, too, in little rows of curls, which heightened this appearance. I do not know whether she was pretty or not; but I liked her face, and so did everybody, and I do not think she could help her dimples. She had something of her father's jauntiness of gait and manner; and any female observer might detect a slight difference in the attire of the two sisters-that of Miss Jessie being about two pounds per annum more expensive than Miss Brown's. Two pounds was a large sum in Captain Brown's annual disbursements.

Such was the impression made upon me by

gether in Cranford Church. The Captain I had met before-on the occasion of the smoky chimney, which he had cured by some simple alteration in the flue. In church, he held his double eye-glass to his eyes during the Morning Hymn, and then lifted up his head erect and sang out loud and joyfully. He made the responses louder than the clerk-an old man with a piping feeble voice, who, I think, felt aggrieved at the Captain's sonorous bass, and quavered higher and higher in consequence.

On coming out of church, the brisk Captain paid the most gallant attention to his two daughters. He nodded and smiled to his acquaintances; but he shook hands with none until he had helped Miss Brown to unfurl her umbrella, had relieved her of her prayer-book, and had waited patiently till she, with trembling nervous hands, had taken up her gown to walk through the wet roads.

I wondered what the Cranford ladies did with Captain Brown at their parties. We had often rejoiced, in former days, that there was no gentleman to be attended to, and to find conversation for, at the card-parties. We had congratulated ourselves upon the snugness of the evenings; and, in our love for gentility and distaste of mankind, we had almost persuaded ourselves that to be a man was to be "vulgar;" so that when I found my friend and hostess, Miss Jenkyns, was going to have a party in my honor. and that Captain and the Miss Browns were in vited, I wondered much what would be the course of the evening. Card-tables, with greenbaize tops, were set out by daylight, just as usual; it was the third week in November, so the evenings closed in about four. Candles and clean packs of cards were arranged on each table. The fire was made up; the neat maidservant had received her last directions; and there we stood, dressed in our best, each with a candle-lighter in our hands, ready to dart at the candles as soon as the first knock came. Parties in Cranford were solemn festivities, making the ladies feel gravely elated as they sat together in their best dresses. As soon as three had arrived, we sat down to "Preference," I being the unlucky fourth. The next four comers were put down immediately to another table; and presently the tea-trays, which I had seen set out in the store-room as I passed in in the morning, were placed each on the middle of a card-table. The china was delicate eggshell; the old-fashioned silver glittered with polishing; but the eatables were of the lightest description. While the trays were yet on the tables, Captain and the Miss Browns came in ; and I could see that, somehow or other, the Captain was a favorite with all the ladies present. Ruffied brows were smoothed, sharp voices lowered at his approach. Miss Brown looked ill, and depressed almost to gloom. Miss Jessie smiled as usual, and seemed nearly as popular as her father. He immediately and quietly assumed the man's place in the room; attended to every one's wants, lessened the pretty maidservant's labor by waiting on empty cups and bread-and-butter ladies; and yet did it all in so easy and dignified a manner, and so much as if it were a matter of course for the strong to attend the weak, that he was a true man throughout. He played for three-penny points with as grave an interest as if they had been pounds; and yet, in all his attention to strangers, he had an eye on his suffering daughtersuffering I was sure she was, though to many eyes she might only appear to be ir-Miss Jessie could not play cards, but she talked to the sitters-out, who, before her coming, had been rather inclined to be cross. She sang, too, to an old cracked piano, which I think had been a spinnet in its youth. Jessie sang "Jock o' Hazeldean" a little out of tune; but we were none of us musical, though Miss Jenkyns beat time, out of time, by way of appearing to be so. It was very good of Miss Jenkyns to do this;

for I had seen that, a little before, she had been a good deal annoyed by Miss Jessie Brown's unguarded admission (a propos of Shetland wool) that she had an uncle, her mother's brother, Miss who was a shop-keeper in Edinburgh. the Brown family when I first saw them all to- Jenkyns tried to drown this confession by a have.

terrible cough-for the Honorable Mrs. Jamieson was sitting at the card-table nearest Miss Jessie, and what would she say or think if she found out that she was in the same room with a shop-keeper's niece! But Miss Jessie Brown (who had no tact, as we all agreed the next morning) would repeat the information, and assure Miss Pole she could easily get her the identical Shetland wool required "through my uncle, who has the best assortment of Shetland goods of any one in Edinboro'." It was to take the taste of this out of our mouths, and the sound of this out of our ears, that Miss Jenkyns proposed music; so I say again, it was very good of her to beat time to the song.

When the trays reappeared with biscuits and wine, punctually at a quarter to nine, there was conversation, comparing of cards, and talking over tricks; but by and by Captain Brown sported a bit of literature.

"Have you seen any numbers of The Pickwick Papers ?" said he. (They were then publishing in parts.) "Capital thing!"

Now Miss Jenkyns was daughter of a deceased rector of Cranford : and, on the strength of a number of manuscript sermons, and a pretty good library of divinity, considered herself literary, and looked upon any conversation about books as a challenge to her. So she answered and said. "Yes, she had seen them; indeed, she might say she had read them."

"And what do you think of them ?" exclaimed Captain Brown. "Aren't they famously

So urged, Miss Jenkyns could not but speak. "I must say, I don't think they are by any means equal to Dr. Johnson. Still, perhaps, the author is young. Let him persevere, and who knows what he may become if he will take the great Doctor for his model."

This was evidently too much for Captain Brown to take placidly; and I saw the words on the tip of his tongue before Miss Jenkyns had finished her sentence.

"It is quite a different sort of thing, my dear madam," he began.

"I am quite aware of that," returned she. "And I make allowances, Captain Brown.

"Just allow me to read you a scene out of this month's number," pleaded he. "I had it only this morning; and I don't think the company can have read it yet.'

"As you please," said she, settling herself with an air of resignation. He read the account of the "swarry" which Sam Weller gave at Bath. Some of us laughed heartily. I did not dare, because I was staying in the house. Miss Jenkyns sat in patient gravity. When it was ended, she turned to me, and said, with mild dignity-

"Fetch me Rasselas, my dear, out of the book-room."

When I brought it to her, she turned to Captain Brown-

Now allow me to read you a scene, and then the present company can judge between your favorite, Mr. Boz, and Dr. Johnson."

She read one of the conversations between Rasselas and Imlac, in a high-pitched majestic voice; and when she had ended she said, "I imagine I am now justified in my preference of Dr. Johnson as a writer of fiction." The Captain screwed his lips up, and drummed on the table, but he did not speak. She thought she would give a finishing blow or two.

"I consider it vulgar, and below the dignity of literature, to publish in numbers."

"How was The Rambler published, ma'am?" asked Captain Brown, in a low voice, which I think Miss Jenkyns could not have heard.

"Dr. Johnson's style is a model for young beginners. My father recommended it to me when I began to write letters-I have formed my own style upon it; I recommend it to your favorite."

"I should be very sorry for him to exchange his style for any such pompous writing," said Captain Brown.

(To be continued)

Enjoy what you have, and do not be envicus of those who have more than you

Sold His Wheat.

There is nothing too good for us now, I shall have a new sealskin sacque. And Johnny is going to get him a horse That can pass anything on the track : And mother will dress up in silks, And, oh, but life's easy and sweet-Evrybody's polite and clever and kind Since father has sold his wheat !

We'll build a new house in the spring, And we'll store the old organ away, And as soon as the dicker is made I shall have a piano to play. The fellows are coming in droves And life is deliciously sweet-Oh, every one seems just too lovely to us Since father has sold his wheat !

-Cleveland Leader

The Last Sheaf.

It had been a perfect harvest day, the air sharp and bracing, and the sky overhead clear and blue as a sapphire. Since early morning the sun had shone with steady brilliance, and the west was still raddy with its dying glow, when the moon rode out in queenly splendor. But instead of yellow corn or clustering sheaves, it shone to-night on long stretches of bare stubble. A spell of dry weather had enabled the farmers to secure their grain with unusual rapidity, and even on the cold uplands of Fife there was not a single sheaf of standing corn. In the stackyard at Muiredge, John Cairns stood regarding his handiwork with supreme From his youth he had satisfaction maintained the reputation of being the best stacker in the East Neuk, and though he was now in his 65th year, the row of neat stacks before him were sufficient proof that his hand had lost none of its

cunning.

How John Cairns and his wife managed to scrape a living off Muiredge was a problem often discussed among the farmers in East Neuk, for, besides being a bleak, cold-lying place, it consisted of lit-tle more than fifty acres. Yet they had struggled on in it for well nigh forty years, since they had begun life together

as man and wife.

Three children had been born to them. the eldest a daughter, who had died in her girlhood, and two sons. The elder of the two had made an early and imprudent marriage with an out-worker in the neighborhood, and thus handicapped in the race of life, had been forced to hire as a plowman, from which level he never afterwards succeeded in rising. The younger son remained with his parents till his twenty-third year, when, filled with a burning ambition to seek his fortune abroad, he left his native country and emigrated to Australia. For a few years they heard from him at brief intervals, but in the end all communication ceased, and they had not the remotest idea whether he still lived.

Thus, in their old age, John and Kirsten Cairns were forced to fight the battle of life unaided, and how hard the struggle was at times, even the shrewdest guesser

could not have gauged exactly.

With the assistance of one hired woman, John had brought in and stacked the whole of his grain. To-night they had been working late, and the old man, though worn out with his long day's labor, was conscious of a strangely up-lifted feeling for which he could not ac-

He wandered round the yard, counting the stacks over and over again, and wondering if it could be because they numbered two more than usual that he felt so much elated. Then, remembering suddenly that Kirsten would be waiting supper, he set off towards the steading with the last sheaf under his arm, which, according to a time-worn custom, he always carried home with him. Its presence in the house indicated a mild form of harvest festival.

Kirsten was standing outside the kitchen door watching for him, an uncouth yet pathetic-looking figure in the short gown and petticoat of the Scottish peasant wo-Her face was eager and careworn, her shoulders bent with much toil, and her hands full of the restless movements of one who never knows what it is to be unoccupied.

"Is that you, John?" she cried across

the yard.

"Aye, mistress, it's me," he answered back. "Ive been langer o' gettin' through than I expeckit, but the horse, puir beasts, begun to fail a wee efter their usual lowsin' time, an' we had to ca' awa' canny."

"Elspet brocht them in mair than half an hoor syne," she added. "I gaed ower

an noor syne," she added. "I gaed ower to the stable to see that they got a bit extra fodder efter workin' late; but what hae ye been aboot sin' syne?"

"Oh, I was jist lookin' roun' the yaird to mak' sure a'thing was richt," he returned. "You should see what a bonnie raw o' stacks we hae, Kirsten; here's the last sheaf, an' a thumpin' big ane it is. I dinna min' o' ever bringin' hame ane like it, unless it was that 'ear oor Dave was born. Hae ye min' o't, wumman? We had a graund hairst that 'ear!"

"Ay, I hae min' o't," she answered, turning away abruptly. "Come awa' in to yer supper, then; it's been waitin' this hoor an' mair."

A sparkling log fire filled the kitchen.

A sparkling log fire filled the kitchen with a ruddy glow, and when the light fell on Kirsten's face, it was seen to wear strangely troubled expression. table was spread with the evening meal, a plate of home-baked bannocks, a bit of cheese, and a bottie of harvest ale.

While John hung the sheaf on the nail above the fireplace, Kirsten filled out a cup of milk for herself from a jug which stood on the dresser. Then they sat down together, and ate their supper by

the light of the log fire.
"I'm thinkin' we'll hae something ower for oorsels this 'ear efter we pay the laird." began John, when he had quaffed off a glass of ale.

Ye've thocht that mony a time afore, guid man, yet we're aye in the auld bit,

Kirsten made answer, soberly.

"Ye're no losin' hert, are ye. Ye're weel eneuch, I hope? Ye've been workin' ower hard this while back, I doot," he returned in one breath, and in the uncertain light of the fire scanned her face eagerly.

"Dinna pit versel' aboot, John, there's naething wrang wi' me, only a body can-na help their thochts, an' it's gein me a sair hert this day to see ye tearin' on as ye've been doin', wi' hardly a meenit to draw breath. I wadna min' sae muckle gin it was to bring ony guid to yersel' but a' the siller we've slaved for this last forty year has gane to the laird, only to help him to carry oot his ill ends. no easy believin' whiles that the Lord is mindfu' o' His ain, for the maist o' mercies seem to gang whaur they're neither worked for nor deserved.

" Hoots! wumman, ye manna speak like that," said John, still regarding his wife anxiously. She was a silent, reserved woman, who did not often give expression to her own thoughts, and this sudden outburst troubled him not a little. 'We've been bare eneuch whiles, I'll grant, but we've never wantit for meat' ar' claes, an' a roof aboon oor heids."
"Ye're aye wearin' the blacks yet that

ye got when we were first mairrit, John, an' the last new goon I had was when Leeby dee'd, twenty-five 'ear syne. We hinna even had the comfort in oor bairns that ither folk hae. Had Leeby been spared, things micht hae been differenta dochter's aye a dochter to the end o' her days. Jock was a saft chap frae the first, an' I never expeckit muckle o' him ; he has his ain adae wi' that wife o' his, an' their seeven bairns, but oh, John! I can never get ower Dave. My hale hope was centred in him, an' I made sure he wad bring honour an' credit to oor name. I'd raither believe him deid than think he'd forgotten his faither an' mither! It's the terrible uncertainty o't a' that mak's it mair than I can thole, an' though it's mair than five 'ear noo sin' we heard onything o' him, my first thocht every mornin' when I rise is, will there be ony word o' oor Dave the day?"

"I often hae they thochts mysel', Kirsten," said John, drawing his chair closer to hers, "an' I've aye the notion that we'll hear something o' the laddie afore we've dune wi' this life. They were happy days when the bairns were a' aboot us. guid wife! Whiles when I'm workin' oot on the fields my lane, I fin' mysell, awa' back in the past again, an' a' the troubles an' chainges we've haen slip clean oot o' sicht. Dae ye min' the day, Kirsten, that we were mairrit doon i' the Elie, an' I brocht ye hame to Muiredge in a carriage? Ye were as braw that day as ony leddy i' the land."

"Aye, John, I min' it weel," she answered, and her eyes met his in a wistful gaze. "It was the only drive I ever had wi' ye, but we've walkit mony a mile thegither sin' syne."

An' ye've never rued the day ye cam'

to Muiredge, hae ye, Kirsten?'

'No, John, I can honestly say I've never rued. Ye've been a guid man to me, an' though I've a grudge again the place for giein' us sae little back for a' oor toil. it wad be like ruggin' the moss frae a what he like light the moss had a stane to tak' me awa' frae't noo. Wheesht! what na noise is that ootside? It was maist awfu' like a machine drivin' up to the house. There it is again, an' it's turnin' to gang awa' noo. I've heard tell o' sic soun's comin' to fouk as warnin's."

"Dinna speak o't, woman,' interposed John, hurriedly; then they sat in silence for a moment, regarding each other with anxious, troubled looks. Suddenly the handle of the outer door was turned with a sharp click, and before they had time to think, a tall, buirdly fellow strode into

the kitchen.

"Mother! Father! Thank God, you're aye here yet," he exclaimed, and his voice rang joyfuly through the still house.

'John! John! it's Dave, oor Dave!" cried Kirsten, and springing to her feet, she stretched out her arms to her longlost son. John had risen also, even before she spoke, and grasping the hand of his son, wrung it silently, his heart too full of gratitude to find speech. Kirsten's face was radiant, yet the tears were coursing down her withered cheeks.

"Oh, laddie, whaur hae ye been? oor herts hae been sair for a sicht o' ye, asked, scanning him from head to foot. "Ye're weel put on, sae ye canna hae been ill aff—the laird himsel' couldna look ony

mair the gentleman.

"I've made my fortune at last, mother, though it has been at terrible cost," he answered. "Again and again I've been at death's door with hunger and sickness combined, but thank God, for your sakes, have won the victory over all. It has been as I supposed, the different letters I wrote have never reached you. Being far away in an uncivilized place, I had to trust them to the care of others, who either forgot to post them or lost them altoge-

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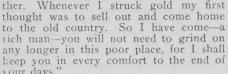
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"Davie, lad, this is a great day, a great day!" cried the old man, wringing his hand again. "I was sure something was gaun to happen, I'd sic a queer uplifted gaun to happen, I'd sic a queer uplifted feelin'; an' yer mither too seemed wrocht up an' oot o' her ordinar'. The corn's a' safe i' the yaird, lad, an' ye've come back just in time to keep the Maiden* wi' us. See, yonder's the last sheaf, an' as I was tellin' yer mither, we hinna haen the like o't sin' the 'ear ye were born. Ye brocht luck wi' ye when ye come first, an' it's come back wi' ye again, though it dinna seem a wee whilie syne that at Muiredge, o' a' places, there wad be mair rejoicin' the nicht than ony ither gate i' the East Neuk."

"Aye, laddie, ye've made a new wumman o' yer auld mither," broke in Kirsten, who still hung about him, unable to withdraw her eyes from his face for a sin-

withdraw her eyes from his face for a sin-gle moment. "I've been at mony a Maiden i' my young days, but I've never felt mair like dancin' than I dae this nicht."

You make too much of me, mother," replied her son, laying his hand fondly on her bowed shoulders. "Yet you are not any more glad to see me back than I am to be home. It will not be my doing if ever I leave you again. Come, let us draw in close to the fire, and we'll talk over all that has past, and see what plans we can make for the future."

"Aye, there's muckle to talk ower, lad-

die, but somehoo it seems as if the sicht o' ye was eneuch for me the nicht," answered Kirsten, taking her old chair by the ingle neuk. "I hinna felt sae prood

sin' the day yer faither asked me to be his wife."

"We've had a weary yokin', Kirsten, or we got by wi' the sawin' an' the hairst," added John, "but the last sheaf's brocht the the beauty was the sawin' and the hairst," added John, "but the last sheaf's brocht the beauty was the sawing war in the sawing was the sawing

"Dinna say luck, John," put in Kirsten, with a quiet smile. "It's the Lord's daein,' blessed be His name."

*Feast celebrating the ingathering of the

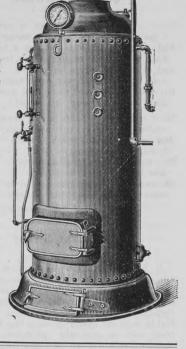
When writing advertisers, mention The Farmer have responsibility too.

Children at Christmastide.

"If there is one day in the year which rightly belongs to the young it is Christmas Day," writes Edward W. Bok in the Christmas Ladies' Home Journal. "It should be given over to them, therefore, without stint or reservation. And I think sometimes that parents do not always understand this. It is right and allessential that restrictions upon the amusements of the young should prevail in every home. But Christmas Day is the one day when these barriers ought to be lifted, and the young given free play. No wholesome liberty nor indulgence should be withheld from a boy or girl on that What of it, my dear friend, if such liberties do mean a tear here, or a broken chair there? Suppose the boy is particularly noisy on Christmas. What of it? Tell me, if you can, a better sign of strong, young health than the noise from a boy's lungs! Suppose he does throw himself or even jump or stand, on your himself or even jump or stand, on your best lounge, and soil or rumple your best tidy! Pass over it, don't notice it, but let the boy have his Christmas Day. And if the little girl does insist upon putting her sticky candy fingers on your dress, what of it? Let her romp and tear all over the house. Give her the joy of feeling that for one day the house is hers in every nook and corner of it. Let her put her smutchy little hands on the white paint of door or wall. I know a home, my dear woman, where the marks of four little smutchy fingers may be seen any day on the white paint of a door, and they are treasured above the costliest ornaments in that house. Nothing could induce the mother of that home to wipe off those finger-marks, and gayly would her heart sing if the little fingers that put them there could make others all over the doors and windows of that house.

* * * Let each one of us who can, give
freedom and zest to the dearest treasures of the Christmastide; the young barbarians of our homes. God bless them, I say. May each child in this land of ours have a Christmas Day this year fashioned after its own heart." after its own heart."

The making of home pleasant is not a one-sided thing. The lion's share belongs to the mother, but husband and children



Hot Milk an Excellent Stimulant.

When overcome by bodily fatigue or exhausted by brain labor no stimulant. so-called, serves so well the purpose of refreshment and rest, both bodily and mentally, as milk. When heated as hot as one can readily take it, it may be sipped slowly from a tumbler, and as it is easily digested one feels very soon its beneficial effects. Few persons realize the stimulating qualities of this simple beverage.-Ladies' Home Journal.

Chestnut Stuffing for the Turkey.

"Turkeys are best roasted unstuffed, but people have, however, become so accustomed to the flavor of the stuffing in the meat of the fowls that it seems almost impossible to get along without it. Bread stuffing is, no doubt, the most objectionable of all. Acting as a sponge, it draws the juices from the meat, leaving it dry and tasteless. Chestnuts are much to be preferred, and where these cannot be proported sweet or white potatoes or be procured, sweet or white potatoes, or even rice may be substituted. All must be boiled before using. For a ten-pound turkey one quart of Spanish or two quarts of common chestnuts will be required. Shell, blanch and boil them until tender. Drain, mash or chop fine; add a Shell, blanch and boil them until tablespoonful of butter, a teaspoonful of salt and a saltspoonful of pepper. Mix, and stuff into the turkey."—Ladies' Home Journal.

The great fire which destroyed the town of Casselman, Ont., developed wonderful resource in a 7-year-old French boy, Jos. Lafrance, who, with his two little brothers of 6 and 4 years old, was visiting his grand parents. When the fire broke out, the lad, without the advice of anyone, caught his two little brothers and led them one by each hand out of the burning house. He ran with them to the Nation river, several rods away, where he knew a boat lay at the bank. He kept them beside him on the bank until the fire had come near them, and then the brave little fellow that he was he rowed the boat out into the river and thus saved the lives of himself and his charges. The children remained all night out in the

Two of the World's Greatest Singers.

The volume of reminiscences entitled "Marchesi and Music," which the Harpers have just brought out, is an extremely interesting record of the career of the most distinguished teacher of singing at the present time. Madame Marchesi included among her pupils such artists as Melba, Calve, Sibyl Sanderson, Eames, and Gerster, and she has known nearly all of the grant nearly all of the great representatives of music during the past fifty years, among them Liszt, Verdi, Manuel Garcia, Meyerbeer, and Rossini, and about many of them she has delightful stories to relate. In telling of her acquaintance with Rossini, she repeats the account he gave her of the first performance of his opera, "The Barber of Seville," which is especially worth quoting in view of the enormous popularity the work has since achieved all over the civilized world.

over the civilized world:—
"The eventful first night arrived at last, and throughout my artistic career I have never experienced a more stormy evening. It was Christmas day, and somewhere ing. It was not the hostile party alone, the other side of Fargo. We had been

but a whole series of mishaps which contributed to the great fiasco of my opera. The over-ture was completely drowned, as well as the first chorus, by the hissing and whistling of the public. At this act of injustice, Garcia, beside himself with anger, grew so excited that he broke several strings of his guitar while accompanying the seren-ade. This caused such a disturbance that nothing more of the music could be heard. Poor Basilio, a debutant, be-came so alarmed at the uproar that he trod on his long cloak and fell flat on the stage. When he got up, his nose was bleeding so profuse-ly that it was some minutes before he was able to sing. The noise then grew ter-Finally, just

as the public were quieting down a cat | suddenly appeared on the stage, and was only driven off again with much trouble and loss of time. Thus was the unfortunate evening brought to a climax. The curtain fell and the performance was

stopped.

"Although it was a failure, I was none the less calm and satisfied, for I had the conviction that I had worked conscientiously, and I recognized the injustice of an audience, who in their blind prejudice, had not listened to a single bar of my music. It is the custom in Italy for every composer to conduct his opera for the first three nights, but the next morning I begged the manager to release me from this obligation, and he very gladly granted my request. Soon after this unfortunate performance, a reaction set in among the frequenters of the opera, some praising the overture, others remembering the melody of the first finale, others again thinking the air of Figaro original, and so forth. This was sufficient to induce the greater part of the public to give some attention to the second performance. This time I remained at home alone, trying to write and to read, but could not collect

my hand, and mentally sang the overture and right through the first act. Suddenly I was seized with an uncontrollable curiosity. I wanted to know what reception my music was meeting with on this second hearing, and resolved to go to the theatre, when an extraordinary noise called me to the window. There I saw thousands of people with torches in their hands, coming towards my house, and before I realized what was happening, I was being carried in triumph to the theatre, amidst the enthusiastic cries of 'E viva Rossini!' I had had no time to exchange my dressing gown for a coat, and thus was obliged to conduct the 'Barbiere' from the beginning of the second act. The audience that had been so antagonistic on the previous occasion now became wildly enthusiastic, and at the end of the performance carried me home in triumph. Such was the baptism of my 'Barbiere.'"

A Runaway Christmas Tree.



MADAME MARCHESI AND MADAME MELBA

snow-bound for three days in Montana, or we'd have all been home. At a little station a man got on who was soon talk-ing familiarly. He seemed like an honest man; indeed, the dominie detected a childlike note in his character which he suspected might come from the man's long life close to the great heart of na-ture. After he found that he could not seil us any lots in Centrapolis he laid aside business and told the following story. We should have doubted parts of it had it not been for the man's intimate association with the great heart of nature. He said :-

"Queer place to spend Christmas, gentlemen; but queer things are always happening in a new country. Makes me think of a little occurrence at Christmas time last year out near where I live. There are a few Scandinavians around there—bang-up class of settlers. Honest as the day is long, and guileless as a newborn babe. This thing happened out at the Johnson school house, near where my friend Ole Erickson lives. A few days before Christmas Ole came to me and

said:
"'You see hare, Mr. Yackson'—my

my thoughts. I then took my watch in name is Jackson-'you know mae faderen-law, old man Oleson?

"'Vell, hae haf a team of vork-horses aye vants to buy, but hae ask too much for 'em. Aye tank aye feex de old yentleman so hae seel de horses scheep. Dare bees going to be a Chreestmas tree out at de Yonson school house—aye goirg to poot on somet'ing nice for heem. Aye tales mae vooman aye poot on vun cow. Eeet mek heem feel good to geet a Aye haf vun cow dat vas dry-she doan geef no meelk now. Aye tales mae vooman aye poots on dat cow for mae fader-en-law. Dis cow not bees mooch on geefing meelk any time-all long legs, long horns, sweech her tail, unt keeck de meelk pail forty rod. Aye says to mae vooman dat ve keel two birds vid von rock—geet reed of de old keecker, unt geet de team scheep. Aye tank aye bees onto mae yob all right 'nough!'
"'But you can't put a cow on a Christmas tree,' I said to him.

"'Oh, aye not hang her oop on de tree; aye yust tie her to eet.'

"So he went off, and afterwards I heard about how it all came out. and his wife took the cow, and just before and his whe took the cow, and just before the thing opened up got to the school house. 'Ve vants to put on de cow,' says Ole; but they wouldn't listen to him. But Ole wasn't to be bluffed that way; so he says, 'Tale you vat aye do; aye stand de cow behind de school house unt open de back door a leetle unt poot de rope troo de crack upt tie eet to de de rope troo de crack unt tie eet to de bottom of de tree.' Some of 'em thought that was hardly the thing, but they agreed to it at last, and he stood the cow outside the back door, and ran the rope which was around her horns through the crack and tied it to the tree just above the floor. The tree was a small one, which wasn't strange, as it had come 300 miles by rail.

"It was a mild night, and the cow cottoned to it all right enough, so Ole and his wife went around front and took their seats with the others. There was the regular exercises that they always have at the such contraptions—singing by the Sunday school, speaking by some members of the infant class, and that sort of gutt, after which the minister got up and said: "My friends and brethren and sisters, what a beautiful tree we have here, and what rich fruit it bears! We are, most of us, far away from our former homes, and in a new and untried country. We know not what may be before us for the coming year, but of this tree and the many presents it holds we are certain. We can pluck the gifts of loved ones from its branches, even as I do now, and—' Just then Ole's cow jerked around her head. and the door swung open, and she saw the light, let out one bellow, and made a jump like a kangaroo, yanking that tree out of the door butt-end first. Then she went tearing off down the road towards home, bellowing at the top of her lungs, kicking like a bay mule, and snatching that tree along behind her like a plug hat tied to a dog's tail. Ole came in to tell me about it the next day. 'Dat old keecker, she never stop teel she geet to mae place,' he said. 'unt de presents all along de road. Unt de peoples day say eef day can geet de tree, dat day stand heem oop, unt day leench Ole on heem. So mae unt mae vooman ve spend all de night peecking oop dae t'ings vid a lantern unt carrying dem back. But ve tank some of dem geet lost een de snow

after all.'
"'Did you take the cow over to your father-in-law's this morning?" I said to

"His face got as long as a fiddle, and then he said : Yah, aye tek her ofer. Unt he mek a grin on hees face, unt he say, perty nice, Ole." Den after a v Den after a vhile aye say to heem, "How mooch for dat team of vork-horses?" Unt de old faller hae say, "Two hundred dollar;" but last veek hae say one hundred and seventy-five. Den aye feel like aye vish de cow she might keeck me forty rod, like she do de meelk pail.

'I always felt rather sorry for Ole because his scheme failed; but all of us slip up on our plans once in a while."—From the "Editor's Drawer," in Harper's Mag-

azine for December.

Uucle lke at the Institute.

Frien's, I ain't much of a speaker, I amost 'u'd rather lis'en.

But there's a cryin' evil that hain't been mentioned vet :

It does more to hurt the farmer than the blunderin' politician.

The evil I refer to is, a runnin' into debt.

I ain't much afraid of nothin' in the line of bugs and weather :

They allus leave us somethin', though they do a pile of harm.

But. I swan! it makes me trim'le when I see a man so reckless

Es to sell himself to slavery by a mortgagin' his farm.

It's like a heijus cancer growin' on a feller's in'ards,

And a eatin' out his stren'th and life by night as well as day.

And if it gets upon you, I've learned from observation.

The chances are ten to one that it's agoin' to stay.

Er I might call it a 'strictor, a coilin' and a

And a drawin' itself tighter at each succeedin' roun',

And when for years you've fed it all your crops and all your critters,

At last it takes a mighty grab, and gulps the farmer down.

I don't know much of polytics, the laws may hev got twisted,

But if we lose our innin's once, we git another roun',

But there's mighty slinder comfort in the laws or proclamations

For a slavin' farmer holdin' a mortgaged farm down.

Do ud'out the stylish buildin's, let the youngsters 'arn their larnin'.

Fair share of work has never yet done boy or girl harm.

Do ud'out the "modern comforts." 'n'less that you can git 'em

Ud'out barterin' of your birth-right by mortgagin' your farm.

-Mary E. Burns.

Old People's Christmas Gifts.

In the Christmas Ladies' Home Journal Edward W. Bok writes that he 'would not be surprised if the dear old' ladies of our land should rebel at the customary presents which people send them at Christmas time,' gifts that are severely practical, and ever a reminder of their I wish at this Christmastide. he continues, "every young girl might bring her mind to hunt out some aged saint, and bring new brightness into that life by some holiday thought or attention. A bunch of bright flowers can bring a year's sunshine into a sunset life. Let the gift be ever so simple: the attention ever so small: but let it be bright: let it be suggestive of cheer, of hope, of freshness, youth-something that will bring the sparkle to the eye, the tinge of color to the cheek. It will be a double Christmas for you: a fresh, new Christmas for the

old, while to you, my girl, it will mean more than you think. We always gain more than we give by associating with We always gain The poorest old lady in the old people. land is rich in knowledge for a young It always does a girl good to come in contact with an old lady. The girl may be the most brilliant college graduate who ever addressed a valedictory to her class, but in the comfortable chair before her sits one who has learned from experience what the girl has learned from books. As a man takes off his hat to a woman, so I think a young girl should always bow with respect to an old lady. our young girls think over this with the approaching holidays, and seek to throw bright ray of sunshine into some old lady's life. Let every girl who can, see to it that it shall be no longer said that young people care very little for old people these days. There are hundreds dear old ladies in our land whose lives would be lengthened by some fresh, bright Christmas thought from the hand and heart of a young girl. For many such it would be a new Christmas: a sumrise at sunset."

Simple Remedies for a Cold.

Too little attention is paid to colds. It has been said by one writer that "every cold drives a nail in one's coffin.

It is always wise to use every reasonab! precaution in avoiding colds, and after one is perceptible break it up as soon as possible.

A hot mustard bath is usually very effectual in breaking up a cold if taken in the start.

A couple of tablespoons of dry mustard put in a small cheesecloth bag should be thrown in a tub of hot water just before getting in.

Any hot bath should be taken just before retiring, as there is otherwise great danger of taking cold.

Hot lemonade or ginger tea are both good to break up a cold if taken before going to bed.

An alcohol compress has afforded great relief to some when other remedies failed. Saturate a flannel in alcohol and lay it on the throat and chest with a dry one over

A cold which starts in the throat can be frequently checked by the use of potash

For severe hoarseness the white of an egg beaten light and added to the juice of a lemon, two teaspoons of glycerine and sugar to sweeten will afford great relief.

Flax seed with lemon juice will loosen a severe cold on the lungs when other remedies fail. Cook the whole flax seed in sufficient water so it will strain easily and add plenty of lemon juice and loaf sugar. Always drink it cold.

Camphorated oil is prescribed by many. Two-thirds sweet oil and one-third ammonia is excellent to rub on the chest or wherever there is a severe pain.

Pneumonia, lung fever, grip, diphtheria, and some other diseases are quite likely to start with a hard cold, and in many if treated carefully from the instances start nothing serious would result.

There is much truth in the old adage, "an ounce of prevention is worth more than a pound of cure.

Living and sleeping in close, heated rooms which are not properly ventilated is the cause of a great many colds. Improper dress is another cause.

Bathing the neck and chest in cold water every morning prevents many from Wearing warm under gartaking cold. ments with high neck and long sleeves is another preventive.

Every woman should keep her feet warm and dry if she wishes to avoid

Keeping the extremities warm has a great deal to do with not taking cold.

It is a poor economy which advocates the going without proper flannels. Many throat and lung difficulties are brought on by so doing.—Home Doctor.

Household Hints.

The good wife, like the man of to-day, belongs to no social class, and is fashioned by no special training. The highest ranks are proud to own her; to the middle class, she is a god-send; to the lower, domestic salvation. She is a woman wholly destitute of that false pride which sees in manual usefulness degradation, and which holds idleness the same thing as She believes that hands were dignity. made to be used, and that things wanting doing should be done, and that no kind of work dishonors the worker, if so be that it is faithfully and deftly performed. Active usefulness is pleasant to her, and she enjoys the exercise of her powers. She has an almost artistic delight in doing neat jobs, and she delegates to no one what she knows she can do best.

Neatness in her person is one of the most attractive aspects of the house Slovenliness and tawdry bemother draggled finery, what the Scotch call "dirty braw," has a very damaging influence on a young family. Could she but realize that her dress is an evil example to her daughters, that her husband and sons cannot fail to draw comparisons between her dress and that of the ladies they meet in other homes, she might be induced to give more attention to her personal appearance. Not even the burden of care and constant employment can furnish a sufficient excuse for careless personal habits, for few things are more important to the well-being of a family. There is an old saying to the effect that an untidy mother has disobedient children; and while neither parents nor children may realize the why or wherefore of it, yet there is always a lack of respect and an indifference to the authority of a mother who takes no pride in her personal appearance.

Borax has become almost as indispensable an article in every household as salt and pepper. Nothing will so successfully soften hard water as borax. Use it in the proportion of a large handful to ten gal-The texture of the finest lons of water. linen and cotton will not be injured by its use. Stains upon tablecloths and napkins may be readily washed out if borax A little borax boiled is put in the water. in the coffee-pot twice a week for fifteen minutes sweetens and purifies it. cleanse window glass simply use warm water and borax—no soap. Wipe dry, and polish with crumpled newspapers.

The secret of darning lies in running the thread of the darning cotton so far each side of the hole that it does not immediately fray and pull out the goods. Take a long thread of darning cotton to with and run it at least half an inch along the goods on each side of the hole. Continue this until the hole is snugly covered. Now cross these threads in regular darning style, taking care that same precaution is observed. stocking darned in this way will wear, as far as the darning is concerned, as long as if no hole existed.

Purposes, like eggs, unless they be hatched into action, will run into decay.

To the Klondike-The All-Canadian Route.

By Frank Oliver, M.P., Edmonton.

The great gold discoveries and the consequent rush of gold seekers has almost in a day made the Yukon district the most talked of region of the world. The Yukon and how to get there is the allabsorbing topic. As the nearest railroad town and the starting point of two routes to the gold fields, by land and water respectively. Edmonton is interested in the prosperity of the mines, and particularly in the means of reaching them.

THE YUKON REGION.

The Yukon is the region drained by the head waters of the great river of that name, and extends from the Arctic ocean on the north to the 60th parallel, the northern boundary of British Columbia, on the south, and from the eastern boundary of the United States Territory of

100 miles above, and southwest from, the crossing of the international boundary line, and about 300 miles above the junction of the Porcupine and the Yukon.

BEHRING SEA ROUTE.

The route by the main stream of the Yukon to the diggings is by ocean vessel from Victoria to St. Michael's on the Alaska coast, 2,750 miles, and from St. Michael's up the Yukon, 1,700 miles, by stern wheel river steamer. This route is only open about three months, July, August and September, owing to the late date of the pack ice clearing out of the Behring sea, into which the Yukon empties, and the early closing of the river in the lower part of its course in the fall. Owing to the short season, and the long up-stream river voyage, this route cannot be considered adequate for the trade which is certain to be developed in the Yukon, and it cannot be improved.

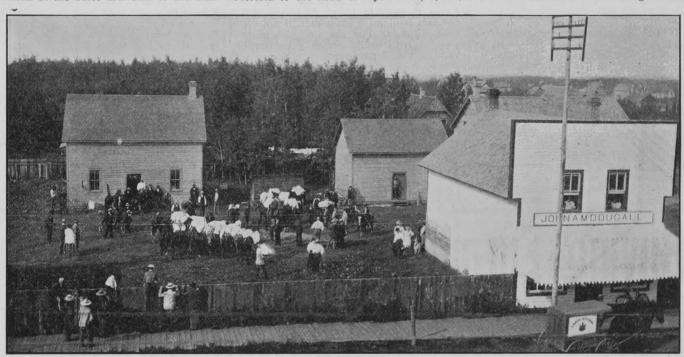
CHILKOOT PASS ROUTE.

The coast route is by ocean vessel from Alaska at the 141st meridian to the sum- Victoria to the head of Dyea Inlet, 1,000 tioned are the ones now being almost

population down to a figure that will allow mines yielding ordinary pay to be worked. At the northern end of the pass the waters of the Lewes are entered upon at Lake Lindeman. Then small boats are built, which are run through a succession of lakes with rapid connecting streams in which some portages are necessary, until finally good navigable water is reached. The remainder of the distance of 500 miles is then easily made down stream. A railroad from the head of Dyea Inlet to the head of steamboat navigation on the Lewes, about 150 miles, would be necessary to make this a fair commercial route. The nature of the pass at the head of the Inlet, the steepness of the grade, the depth of snow in winter, and the fact that the 15 miles from salt water to the summit the difficult part of the route--is in United States territory, will tend very greatly against it ever being adopted.

A BETTER AND ALL-CANADIAN ROUTE NEFDED.

Although the two routes above men-



From Edmonton to Klondike Overland. View of some of a Party of Gold Miners from California leaving Edmonton with a Pack Train for the Klondike Gold Fields Overland by the Peace River District, August, 1897.

900 miles from north to south, by 600 miles from east to west at its southern boundary, and 200 miles at the Arctic coast. The principal rivers of this region which form the Yukon are the Lewes, rising within 30 miles of the Pacific coast, and flowing northwestward, the Pelly rising west of the Rockies and flowing more nearly westward to its junction with the Lewes, at the site of old Fort Selkirk, (below this point the united river is known as the Yukon), and the Porcupine, which, after rising within 100 miles of the Yukon, near the international boundary and flowing northeastward, reaches a point within eighty miles of the Mackenzie, it then bends sharply and runs southwestward to join the Yukon at the site of old Fort Yukon in Alaska, about 150 miles west of the international boundary. These three sources, and the main river itself, provide the four present practicable routes to the Yukon region. The Mondike diggings, which are the centre of t name which empties into the Yukon tha its west bank about 200 miles below on junction of the Pelly and Lewes, about | will bring the cost of living of a large | States territory. It goes without saying

3,500 feet high by the Chilkoot or White passes. Packing over these passes has hitherto been on men's backs at a cost of 15c. to 20c. a pound. At present, owing to the rush there is a congestion of freight there which will absolutely prevent the largest part of what is offered from being taken across. Owing to the height of the mountain pass, and its exposed nature, the weather on it is very severe, and the climb is very steep. much so that it is absolutely impossible for any but a trained mountain packer to take supplies over it. This route has never been used except for miners going in and taking a small supply of goods and provisions for themselves. The principal part of the regular supplies of the region are taken in by the mouth of the Yukon. It is said that improvements have been made in the trail over the pass so that horses can be used, but the rate for packing is still quoted at 15c. a pound for the 35 miles. It is doubtful if this route can ever be improved sufficiently to make it suitable for ordinary commerce, so that supplies can be taken in at such rates as

mit of the Rocky Mountains. It is about | miles. Thence 35 miles over mountains | solely used they are not of such a nature owing to physical difficulties as to permit of the proper and full development of the Yukon region by their use. The known and worked gold-bearing placer area of the Yukon is larger than that of any other single region on earth. Throughout the greater part of this great area the pay is not so very large. But it is large enough to cause the profitable employment of a great deal of labor, provided supplies can be furnished cheaply. Indeed, cost of the supplies not gold-bearing area is what supplies not gold-bearing area, is what really limits the gold production of the Yukon. The area is practically unlimited if the supplies are cheap. But they can never be cheap if the Chilkoot pass or Behring sea routes have to be depended on. Canada must get a cheaper and better route to the Yukon gold fields than either of these, if those gold fields are to be fully developed to the profit of Can-Besides, the two routes are objectionable from a Canadian standpoint from the fact that if dependent on them Canada is doubly cut off from the Yukon by an ocean voyage of from one to three thousand miles and by intervening United

that under such circumstances Canada's hold on the Yukon will always be slight and difficult; and costly out of all proportion to the commercial advantages to be derived.

An all-Canadian, all the year round, allland route to the Yukon is the great necessity of Canada at the present time in order to hold political and commercial supremacy in this the most valuable part of her new territory; and not less to relieve the congestion on the present routes caused by the unprecedented rush to the

There are two practicable all-Canadian routes, the one by the Pelly and the other by the Porcupine branches of the Yukon. That by the Porcupine is practically a water route, down the Mackenzie from Athabasca Landing, 90 miles north of Ed-monton, to Peel river portage, across which portage the navigable waters of the Porcupine are reached. This route is being taken by most of the Edmonton men who have started for Klondike, and it has many advantages as a cheap means of getting supplies into the far north.

LAND ROUTE BY THE LIARD AND PELLY RIVERS.

The Pelly river route is a practicable allland route (or partly land and partly water) from Edmonton to the Klondike. This is the shortest and most direct route from railway communication to the rich dig-gings. The total distance is 1,400 miles gings. The total distance is 1,400 miles from Edmonton, as against 1,600 by the Chilkoot pass and 4,400 by Behring sea and the Yukon river from Victoria, B. C. Four hundred miles of this distance would be good and uninterrupted steamboat navigation on the Pelly and Yukon rivers; the whole distance, except the last 200 miles would be through a grass-growing region of good summer and moderate win-The season of travel on it

would be much longer than on any other route, as there are no high elevations to be crossed and the greater part feels the influence of the Chinook winds. It has been travelled throughout its whole length by scientific men of the highest repute in the employ of the Canadian government and their maps and reports are available to everyone for information regarding it. At several important points it touches the navigable water system of the Mackenzie, and at other points passes within reaching distance of the Ominica and Cassiar diggings, besides crossing the gold-bearing Peace, following up the gold-bearing Liard and down the gold-bearing and very little prospected Pelly. Wagon roads, pack trails and boat routes form the through connection at execut form the through connection at present. It is because of the inconvenience of these changes in the mode of conveyance that it has not yet been used. It is desired in this article to place before the public as shortly and as plainly as possible the facts as to its probable practicabilty as an all-land route, and the certainty that at a moderate expenditure it could be made an excellent cattle, pack trail and sleigh road throughout its entire length and a wagon road for a great part, if not all of the distance. For the first 600 miles a wagon road would certainly be possible, and it would pass through a region well within the limits of profitable grazing and agriculture, as proven by actual experiment at different points. Therefore, the ment at different points. Therefore, the supplies necessary for the conduct of freighting and travel on such a road would be cheaply procurable. At no point would it be near the United States boundary, and would therefore be most desirable on that account as a Canadian mail route and for the keeping up of telegraphic communication under any circumstances that might arise. This is of the future, however. Immediate interest

in the route is centred in the possibility of travellers for the Yukon getting through over it this season, and of cattle being driven over it to supply the requirements of the miners during the coming At the time of writing, August 18th, 1897, some twenty Californians are in Edmonton, intending to attempt the route this season, having been debarred by the congestion of freight and passengers and the shortness of the season from taking the Chilkoot route. Hundreds, if not thousands, will follow, if their report is favorable. It is time for Canada to is favorable. It is time for Canada to wake up. If she would profit by the development of her own resources, all she has to do is to reach out her hand and rush a pack trail through to the Pelly river this season.

TABLE OF DISTANCES.

The route to be followed and the distances from point to point a

tances from point to point are.
Miles.
Edmonton to Peace river crossing 260
Crossing to Forks of Nelson 240
Forks to Junction of Nelson and
Liard 120
Nelson to Dease up Liard 160
Dease to Pelly 170
Pelly to junction with Lewes 220
Junction to Klondike 200
m .
Total1370

EDMONTON TO PEACE RIVER.

From Edmonton to Peace river and on to the forks of the Nelson a number of routes may be taken, and the distance given above may be somewhat shortened However, not to confuse, the best known will be taken, and Peace river crossing will be considered as an objective point The Peace has to be crossed in any case. This part of the country has been travelled and mapped by Prof. Dawson, director

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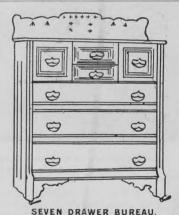


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of the Dominion geological survey, his reports and maps are procurable from the geological department, Ottawa. The route at present generally taken by the Peace river traders, who outfit at Edmonton, is by wagon road to Athabasca Landing, 90 miles. At the Landing their freight is transferred to boats which are taken up the Athabasca, Lesser Slave river and Lesser Slave lake. Their horses are driven on the south side of the Athabasca to the mouth of Lesser Slave river, 40 miles. Then they are swum across the Athabasca, and taken along the north side of Lesser Slave river, 40 miles, and along the north side of Lesser Slave lake, 85 miles. At the Hudson's Bay fort, at the west end of Lesser Slave lake, the traders transfer their goods to carts, which are taken by road, 60 miles, to the crossing of Peace river at the junction of the Smoky. If horses are to be packed through this route can be shortened by taking the wagon road through St. Albert to the site of Fort Assiniboine, on the Athabasca, 85 miles, then northwest to the head of Les-

In W. Ogilvie's report of his trip from the Nelson to the Peace he mentions being told by a Nelson river Indian that he had gone up the east branch of the Nelson to the head of canoe navigation on it and thence to Fort St. John he took four days on foot, probably 50 or 75 miles. In this distance he crossed a ridge of heavily timbered hills. This would indicate that the greater part of the distance was not heavily timbered, and therefore passable for pack horses. A single belt of timber could easily be cut through.

If, however, this route was found to be inadvisable to be followed, the trail still good could be followed across Pine river to Fort St. John and on to Halfway river, 40 miles. The Indians have a good horse trail up Halfway river to boat naviga-tion on the west branch of the Nelson, about four or five days' travel with pack horses, which would not be more than 100 miles. W. Cust and H. F. Davis, when trading at Rocky Mountain portage, a short distance west of Halfway river, were told by Indians of this trail, and W. ser Slave lake, 115 miles, and by the cart Ogilvie, D. L. S., who came up the NelGOLD ON PEACE RIVER.

In this connection it may be mentioned that any part of the Peace river region is suitable for horses to winter out. Considerable gold has been washed from the bars near Fort St. John. At the Forks of the Peace, easily accessible from Fort St. John, and about 100 miles further west, a very rich bar was worked a number of years ago by W. Cust and E. F. Carey. Between 50 and 75 miles west of this point on the Ominica branch of Findlay, which is the north fork of the Peace, good diggings are now being worked. When struck first they were very rich, and owing to the cost of getting in supplies from the coast, which hitherto has been the only route, have never been worked out. From the mouth of the Findlay to the Ominica mines is a difficult piece of mountain country, but recent rich finds are reported from it. No doubt this region could be worked more profitably than ever by taking in supplies from this side of the mountains.



New North West Passage. Edmonton to the Klondike by Water. The H. B. Co.'s Steamer "Athabasca" and Three Traders' Boats about to leave Athabasca Landing en route for Grand Rapids and Mackenzie River.

road to Peace river crossing. This route son and packed from the west branch to has not been travelled for some years, and possibly better time would be made at present by taking the Landing trail. There is a small settlement near the

crossing of Peace river, and a boat could be had there to cross in, while horses would have to swim. Information and guides for a further stretch of the journey could be secured there.

PEACE RIVER TO NELSON RIVER.

From Peace river crossing the country is mixed prairie and timber westward along the north side of the Peace to Pine river, 100 miles west of the crossing. There is a good trail the whole of this distance. On reaching Pine river the direct course would be to turn northwestward along its east bank, between its waters and those of the east branch of the Nelson. This would make the distance from the point at which Pine river was reached to the forks of the Nelson 140 miles, or. from Peace river crossing 240 miles. Information could be had at Peace river crossing, Dunvegan or Fort St. John as to the practicability of this direct route, of which there is very little doubt.

Fort St. John in October of 1891, mentions it in his official report. He did not travel by it, as he left the Nelson before he got as far up as where the trail strikes, but after leaving the river several days he fell into other trails taking the same general course. It may, therefore, be taken as established beyond question that an open pack trail exists from Edmonton to boat navigation on the west branch of the Nelson, by way of St. John and Halfway river, the total distance being 500 miles.

If it were found necessary to go to Fort St. John in order to reach the Nelson river, it would be considerably shorter to take a direct pack trail which goes by way of Lake St. Ann, Sturgeon lake, Smoky, river and Grand Prairie, crossing the Peace at Fort St. John, instead of at the mouth of the Smoky, as before suggested. This route was followed by Henry Mc-Leod, C. E., when employed by the Canadian government to explore the South Pine river pass for the C. P. R. in coming from the pass to Edmonton, and is shown on the geological survey maps accompanying Prof. Dawson's report.

NELSON RIVER.

That there is good boat navigation down the west branch of the Nelson admits of no doubt. Ogilvie started up the Nelson about Sept. 10th, and although he suffered many unnecessary delays he left the upper part of the west branch, within 100 miles of Fort St. John, on Oct.7, the land distance being about 190 miles, and no portages having been made. As this was the season of low water this proves the suitability of the river for down stream navigation. In fact, the Indians use the Nelson and the Halfway rivers as a canoe route, there being a portage of 25 miles between them at a certain point. A party of miners took this route from Peace river to the Liard about 1873. They went up Halfway river in the fall, crossed the portage in the winter and went down the Nelson in the spring.

As to the suitability of the country from the Peace to the west branch of the Nelson for packing through, Mr. Ogilvie, in his report, and J. R. Brenton, of Edmonton, who accompanied him, speak of the timber as being scrubby and the ground generally firm, as it naturally must be, being well-drained and on the rise of the foot hills of the Rockies.

On reaching either the east or west branch of the Nelson with pack horses the packs could be lightened on to boats or rafts, and the journey to the mouth of the Nelson made very easy on the horses by this means. Certainly this could be done with advantage from the Forks down, about 120 miles by land, and probably from 40 to 50 miles above the Forks on either branch. Ogilvie, being confined to the river in his travels, gives no idea as to the possibility of land travel along the Nelson. Certainly there is no such prairie as on Peace river, and the timber become larger with the distance north. But the Nelson flows along the easterly base of the foothills of the Rockies, for its whole length. Geo. Sutherland, of Stony Plain, who lived at Forts Liard and Nelson for some years, has been in these foot hills, and he describes the slope towards the Nelson as dry ground, with scrubby timber. Domestic cattle are kept at both Liard and Nelson, and in the gardens at those posts all the vegetables that can be grown at Edmonton were grown in the greatest perfection. Horses were not in general use by the Indians of the district, but some were used, and the Hudson's Bay company purchased several for use at the posts. In earlier times the Indians had more horses, but owing to lack of care in hard winters many had died off. Murdoch McLeod, of Belmont, also lived several years at Fort Liard, and visited Fort Nelson on the Nelson and Fort Halkett on the Liard. He describes the country as seen to the west and south from both rivers as consisting of rounded timbered hills. No rugged mountains being in sight, until Fort Halkett, which was at the entrance to the Rockies, was reached. He killed wood buffalo near the junction of the Bishop Grandin, of Nelson and Liard. St. Albert, who resided at Fort Liard many years ago, recalls that King Beaulieu brought horses across country from Vermillion, on Peace river, to Liard. This, however, is a different route from that above sketched, and shows that there is a choice of routes. Mr. McLeod travelled once from Fort Liard to Dunvegan on Peace river and back in winter and passed through partly open country most of the This route might, however, be too wet for use in summer. All parties agree as to the possibility of a wagon road being made at very moderate expense from Edmonton to the mouth of the Nelson, and then westward up the Liard valley at least to the base of the Rockies. Certainly a cattle and pack trail and sleigh only question being as to whether the road could be cut out very cheaply, the country is already passable or not. Mr. Sutherland mentions that Chilkat Indians from the Pacific coast sometimes came to Fort Liard to trade. Their route was down the Liard river, but he did not know how long the trip took. However, it is further proof as to the practicability of this route through the mountains.

LIARD RIVER.

On reaching the junction of the Nelson with the Liard—620 miles from Edmonton by direct route—the route would turn nearly due west along the latter stream until the Rocky Mountains were passed. R. G. McConnell, of the geological survey, explored the Liard between the mouth of the Nelson and the mouth of the Dease, 160 miles, in the summer of 1887, coming down stream in a boat. His report and maps are published by the Dominion geological survey. The Liard was used as a boat route from the Mackenzie, at Fort Simpson, to the Pelly branch of the Yukon, by the Hudson's Bay Company for many years. But ow-



While most people appreciate well arranged and well-kept grounds, large or small, many fail to realize that *they* can have equally fine grounds. They have tried a few shrubs or roses, perhaps, growing in thick turf, with no attention given to pruning or cultivating. Under such circumstances good results cannot be expected.

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SEE THE NOR'-WEST FARMER'S PREMIUM LIST ON ANOTHER PAGE.

ing to the Indians and their trade being drawn away from the Pelly river post by the establishment of traders on the Pacific coast, and from the Liard by the competition of traders on Peace river, and also partly owing to the difficulties of navigation on the Liard, the Pelly and Upper Liard posts were abandoned. This still further caused the Indians to desert the further caused the Indians to desert the river was explored by Prof. Dawson, di-district, so that for many years past it has rector of the geological survey of Canada,

Nelson. From the Liard to Thibert and McDame creeks, which are the principal mines in the Cassiar district of British Columbia, is less than 100 miles, and practicable either by pack trail or canoe.

FRANCES LAKE AND PORTAGE.

From the mouth of the Dease to Pelly



Gold Mining at Edmonton .- Mr. Jenner's Steam Dredge, 1897.

been very little known and travelled. Mc- in 1887. The distance to the beginning of Cullough and Thibert ascended it in 1871- the portage from Frances lake to the Pelly 72, and struck the rich Cassiar diggings at the head of its Dease river branch in northern British Columbia. McConnell difficult as in the part of the Liard from mentions several bars in the part between the Rockies and Dease river having been profitably worked. He specially mentions Porcupine bar, 30 miles below the mouth Dease. He describes the valley of the of the Dease and a bar at the mouth of Rabbit river, about 25 miles further down. The navigation of the river is consider-The navigation of the river is considerably impeded by rapids, which have to be passed by portages. But it is a passable route if none better offered. If necessary, as in coming down the Nelson, a pack train could lighten its loads by using boats on the navigable stretches of the river and the horses on the longer portages. Speaking of the nature of the country, Mr. McConnell describes it as generally well wooded, the hills a long distance from the river and not rugged. The Rockies are only a single, narrow range, and are passed on the river in a few minutes in good water, near Fort Halkett, which is just west of the mountains and about 70 miles above the junction of the Nelson. Mr. McConnell speaks of the unwooded portions of the terrescell banks of the river being covered. terraced banks of the river being covered with as luxuriant a growth of grasses and vetches as he had ever seen in any parof the country.

Going over all the information obtainable as to this part of the route, which includes the crossing of the Rocky Mountains, the only possible obstacle to pack and cattle travel at present would be the timber, which might require to be cut through in places. On the other hand. unless the conditions are very different from what they are elsewhere in the Northwest, the timber would not form any very serious objection. Feed for animals must certainly exist all along, which is the main consideration, and the climate certainly cannot be severe.

CASSIAR.

Dease river enters the Liard from the south, 160 miles above the mouth of the The divide crossed in this distance is was showery when he was there, he con-

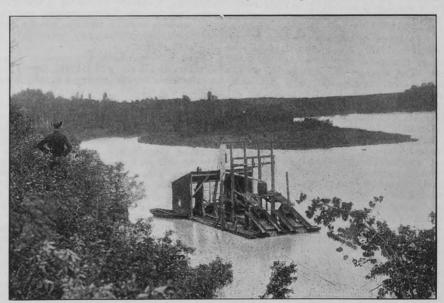
difficult as in the part of the Liard from Dease river down. Prof. Dawson men-

somewhat mountainous, but "no very high summits were seen, the elevations being as a rule rounded and regular in outline, and forming broad, plateau-like areas." The climate becomes less moist as Frances lake is left, and dry, gravelly terraced flats

are not uncommon.
"Grassy swamps are found in a number of places, and a good growth of grass is also met with, where areas have been denuded of forests by successive fires, so that should it ever become desirable to use horses on this portage they might be maintained without difficulty.

P. C. Pambrun, of Battleford, was the Hudson's Bay officer in charge of Frances lake and Pelly bank posts a number of years ago. He says the chief difficulty in the way of a pack train would be the heavy timber along the Nelson and lower part of the Liard. The country is rugged part of the Liard. The country is rugged but the ground is solid, with very few muskegs. There is plenty of grass along muskegs. There is plenty of grass along the route, but being somewhat different from that of the prairie, horses used to the prairie grass will not do as well on it. Horses native to that country would win-ter out on the Liard, but horses taken through from the plains would have to be fed hay. Horses taken from the plains could winter well on the Peace river prairies. Plenty of hay can be cut at the site of Fort Halkett and at Frances lake. Domestic cattle were kept at the former post by the Hudson's Bay company. The snow is never very deep at Fort Halkett, as the Chinook reaches there in the winter time. At Frances lake winter lasts from Nov. 15th to May 1st. Wild fowl come about May 15th. It is no colder in winter at Halkett or Frances lake than at Edmonton, but across the divide on the Pelly it is much colder.
Prof. Dawson mentions finding colors

of gold at the mouth of Finlayson river, the point at which Frances lake is left for the Pelly, and being told that the bar had been worked for a short time by some Dease. He describes the valley of the river and of Frances lake as wide and the a day. Gold quartz veins were found on



Gold Mining at Edmonton.-Dr. Braithwaite's Steam Dredge, 1897.

back country as gently rolling, in some | both sides of Frances lake and were largplaces rising into rounded hills. timber is not large, and in some places is scattered on sandy soil. There is a good growth of grass, and hay meadows are not infrequent. The distance from Frances lake to Pelly river is about 50 miles. The greater part of this can be made in canoes up Finlayson creek to the lake of the same name and down Campbell creek.

est in the canon near the mouth of Finlayson river on the west side of the lake. Quartz from the east side, containing iron and copper pyrites, also contained gold. Prof. Dawson also mentions that in the vicinity of Frances lake wild roses in bloom were abundant in June. The forest growth resembled that of interior British Columbia. Although the weather





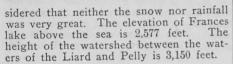
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lower rate of interest, when he can lend it at home on better security and at the higher rate. Insurers in THE GREAT-WEST LIFE have their money invested in Western securities by Western men well acquainted with Western investments.







PELLY RIVER.

Prof. Dawson reached Pelly river on aly 29th, 1887. The elevation above the July 29th, 1887. sea at this point was found to be 2,965 feet. The river is 327 feet wide, with a middle depth at that date of 7 feet. The professor believed it to be navigable for steamboats at that point and for a considerable distance further up the lakes in which it heads. In going down he found it suitable for steamboat navigation and uninterrupted, except by two rapids. first was at the mouth of Hoole river, about 20 miles below the portage. This rapid might be run safely, but can be avoided by a short, easy portage. Another rapid occurs about ten miles further down in Hoole canon. This rapid must be avoided by a portage half a mile in length. From this point there is uninterrupted etembert projection to the conrupted steamboat navigation to the sea.

The land distance, by the Pelly, from

the Frances lake portage to the junction with the Lewes is about 200 miles, and the water distance 320 miles. The country is not rugged, the timber is not large, and many open grassy slopes are mentioned along the banks. The climate is evidently more moderate than in the Klondike region, and apparently there is no reason why pack horses or loose cattle should not be driven through this region without difficulty. Cattle and horses have already been driven to the mines from the Chilkat pass down the Lewes, where the country is much more rugged than on the Pelly. In any case, with a large navigable stream flowing di-

Klondike diggings, with either cattle or freight, would be over, provided the time of year were suitable. If the season were too late for navigation, Frances lake is evidently a better wintering place than anywhere on the Yukon waters, and the surrounding country offers as good a field for the prospector as any other part of the gold region.

Spruce up to two feet through is found at intervals all along the Pelly, but is not as abundant on the upper as on the lower part of the river.

"As in the case of the Upper Liard and Frances rivers, quartz derived from veins is an abundant constituent of the gravel bars of the Pelly, and numerous small quartz veins were observed in the rocks in many places." Small colors of gold may be found in almost any suitable locality along the river, and heavy colors in considerable number were found at the mouth of Hoole river.

Thomas Boswell informed Prof. Dawson that he had worked bars on Ross river, which comes into the Pelly from the north, for \$18 a day. Munro and Langtry had worked at Granite canon, on the Pelly, at \$10 to \$20 a day per man. The head waters of the Macmillan and Ross rivers which probably interlock with those of Stewart river, and of Pelly river

itself, are yet unprospected.

From the junction of the Pelly with the From the junction of the Pelly with the Lewes, about 200 miles from the Frances lake portage, to the Klondike diggings, the Pelly river and Chilkoot pass routes, whether by land or water, would be the same and the distance would be about 200 miles, the mouth of the gold-bearing Stewart river being passed on the way.

GOOD TRAIL NEEDED.

sketched, is possible for pack horses and cattle at the present time. But any question as to its possibility is not enough. There should not only be a route, but it should be a good route. It should be as short and as good as the conditions admit of. It is only by this route that the cattle interests of the Territories can hope to reap any benefit from the development of the Yukon. Business for the cattlemen means business for those who sell to them, and therefore business for every one Although the east of the mountains. coast route has the advantage of cheap navigation for over half the way, the Ed-monton route has the advantage of starting directly from a source of cheap food supply, and of passing through a country where cattle or pack horses will sup-port themselves. Prompt action on the part of the Canadian government in open-ing this trail through this fall would throw a large share of next season's Yukon trade directly into Canadian hands. It is no further from Edmonton to Pelly river than it is from Winnipeg to Edmonton by the Saskatchewan cart trail. The route can be made as easy for pack horses as the Saskatchewan trail was for carts. it were the distance from Edmonton could be made in 60 days. A pack horse will carry 200 to 300 pounds, and in a train one man can manage five horses, travelling 15 miles a day, always provided the trail is good. The low value of horses suitable for packing in the Territories now gives a great advantage to the use of this

THE MACKENZIE ROUTE.

While the land route by way of Liard river has the advantage as a cattle trail and as offering the longest possible season in which miners can get in or out of the rectly to the mines, once men were at the Pelly river the difficulties of reaching the from Edmonton to Pelly river, as above Mackenzie offers very much greater present advantages in the way of taking in large quantities of supplies at low cost. The navigable water system of the Mackenzie extends north and northwestward from Athabasca landing—which is 90 miles north of Edmonton and connected by wagon road-so that the portage from the Mackenzie near its mouth to the Porcu-pine branch of the Yukon is directly north of the Chilkoot pass. The Mackenzie river itself lies close along the northeasterly side of the Yukon district, with the Rocky Mountains narrowed to a single range between. Rivers flowing into the Mackenzie from the west all along its course for a thousand miles interlock at their heads in many cases with the head waters of the Yukon. The Porcupine at its greatest northeasterly bend is within 80 miles of the Mackenzie at the head of the delta into which it divides before entering the Arctic sea. Across this portage the Hudson's Bay company have for many years carried on their Yukon trade. and still do so. It is by this route that most of the Edmonton men who have gone north intend to reach the Yukon, The Hudson's Bay company have always portaged their goods in winter with dogs, but a canoe route a few miles to the north of the Hudson's Bay Co.'s portage has been used occasionally when required in summer. This route was used by R. McConnell, of the Dominion Geological survey, who used it to take his boat from the Mackenzie to the Porcupine, and appears on his map issued by the geological survey. The approximate distance which would have to be made by canoes and short portages from flat-boat or steamer navigation on the Mackenzie side to like navigation on the Yukon side is about 35 miles. This is the only serious difficulty on the whole route, and cannot be considered as a very serious one.

The route by sections is as follows :-

EDMONTON TO ATHABASCA LANDING-90 MILES.

This is a wagon road, over which thoustons of freight is hauled. rate is 75c. to \$1 per hundred pounds.

LANDING TO GRAND RAPIDS-167 MILES.

This is down the Athabasca in steamboat navigation. The H. B. Co. have a stern wheel steamer, 28 feet beam, 135 feet keel, on this stretch, but only for

their own use. Boats for the trip down the Mackenzie must be built at the Landing. The lumber may be whip-sawed there or freighted out from Edmonton. If merely large carrying capacity is required, flat boats are built. These are generally 45 feet long, 8 feet wide at the bottom and 11 feet at top in the centre, and 31 feet deep. Such a boat costs \$75 to \$100, will carry ten tons, and can be handled, except in rapids, by three men. If sailing qualities are wanted, York boats are built. These cost up to \$300 for eight tons capacity. When flat boats are used an extra crew of three men each are hired to help to take the boat through the Grand and succeeding rapids. These men are paid \$25 for their trip to Fort McMurray at the foot of the rapids, and return, with board until they get home. The speed made by a flat boat depends on the stage of the water. In high water the run to Grand Rapids can be made in two and a half days.

GRAND RAPIDS TO MCMURRAY-87 MILES.

This stretch is not navigable for steamers. At Grand Rapids the flat boat loads are portaged half a mile, and the boats let down the rapid by a line. The succeeding rapids are run without portaging, unless in very low water. The time from the tages as it is. It is more than likely that

foot of Grand Rapids to McMurray in good water is one and a half days.

MCMURRAY TO SMITH LANDING-287 MILES

Good steamboat navigation all the way. The H. B. Co. have a stern wheel steamer, 24 feet beam, 130 feet keel, on this stretch. The only difficulty for flat boats is the run across part of Lake Athabasca, 15 miles, to Fort Chipewyan, and ten miles along the shore after leaving Chipewyan, to the entrance of Slave river. A quick passage here depends on a fair

SMITH PORTAGE-16 MILES.

From Smith Landing there is 16 miles of bad rapids, in passing which five portages of boats and cargoes have to be Guides and help for these portages can be procured in the adjoining halfbreed settlement. Block and tackle is used to haul the boats over the portages. The Hudson's Bay Company haul their freight around the rapids by oxen over a 16-mile wagon road. The settlers charge 50c. a hundred for any freight they haul across the portage. They are generally only employed by parties coming up

FOR: SMITH TO PEEL'S RIVER-1287 MILES

There is no break in the navigation for this distance. The Hudson's Bay Co. run a screw steamer, 14 feet beam, 90 feet keel, 14 feet depth on this route. The down trip takes 8 days and the return 22. There is good flat boat navigation, 194 miles, from Fort Smith to Resolution on the of Great Slave lake. Resolution to Providence, along the south shore of Great Slave lake, 168 miles, difficult for flat boats except with fair breeze. From Providence down the Mackenzie proper to Simpson, 161 miles; to Wrigley, 136; to Norman, 184; to Good Hope, 174; to Peel's river, 252; up Peel river to Fort Macpherson, 18 miles, in slow current.

PEEL RIVER PORTAGE.

Rat river comes into Peel river from the west, only about twelve miles above the entrance of the Peel into the Mckenzie delta. Flat boats can be taken up this river some miles. Then the canoe route must be taken for 30 miles to flat boat or steamboat navigation on Bell's river. which enters the Porcupine from the northeast, at its most easterly bend. New boats would probably have to be built on Bell's river for the voyage down the Porcupine; or canoes could be taken up the Porcupine by the more direct route to the gold fields. From Bell's river to the junction of the Porcupine with the Yukon, 400 miles, can be run in flat boats in from five to eight days. To this point the whole journey is down stream except the 35 miles between the Mackenzie and Por-

cheap freight route this could hardly be surpassed. The chief objection to it is that the season is very short, but no shorter than on the Behring sea route. Great Slave lake cannot generally be crossed before July 1st, and the Porcupine should be reached by the middle of September. This short season could be remedied to some extent by the use of steamers to tow flat boats quickly down the Mackenzie and a steamer on the Yukon to tow boats up the 300 miles from the mouth of the Porcupine to the Klondike. By the use of steamers, the improvement of the portages at the Grand Rapids and Fort Smith rapids, and by improvements on the 35-mile portage from the Mackenzie to the Porcupine this would become the principal heavy freight route until supplanted by a through railway. expert canoe men it offers great advan-

short practicable canoe routes exist from the Mackenzie to the head waters of the gold-bearing streams of the Yukon, hundreds of miles further south than the Peel river portage.

Note.-From 15th July to 30th August, 1897 twenty-five men left for the Yukon by the overland, and seventy-seven by the

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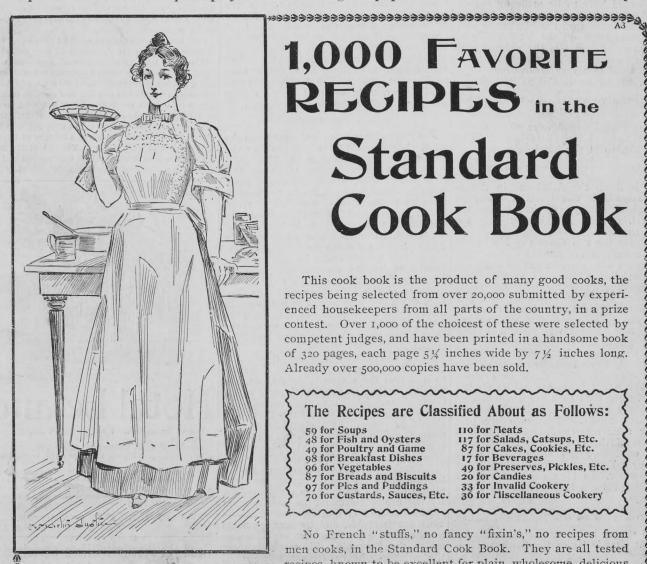
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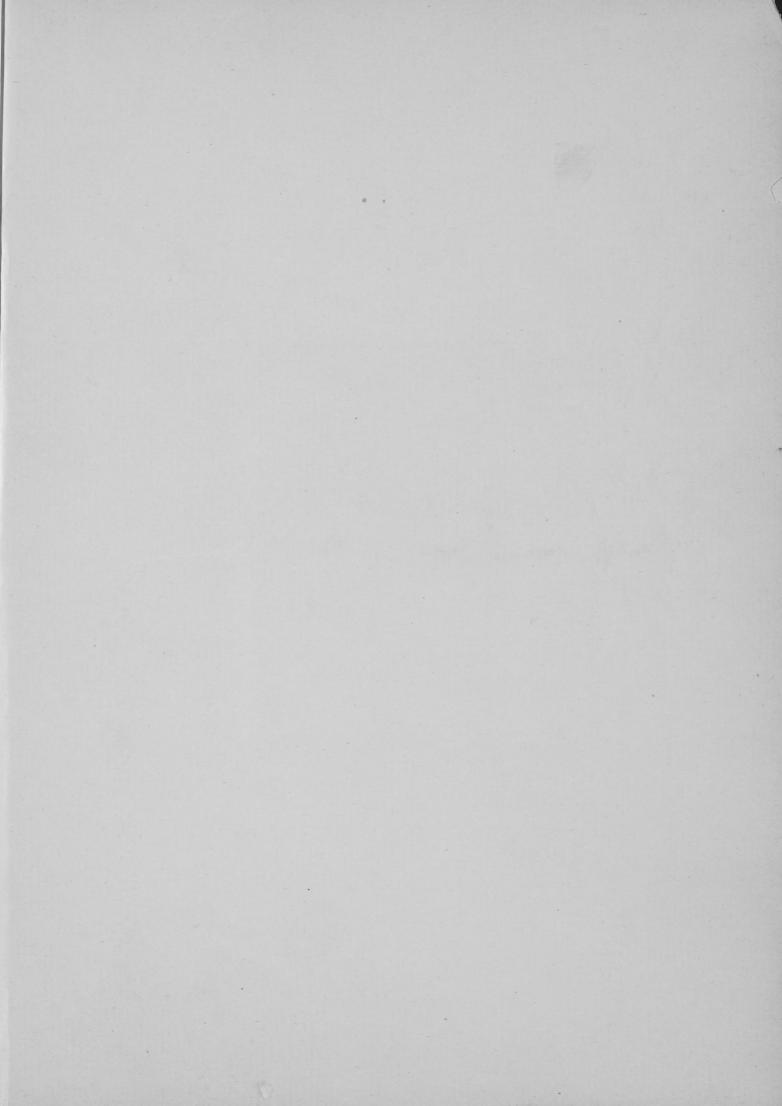
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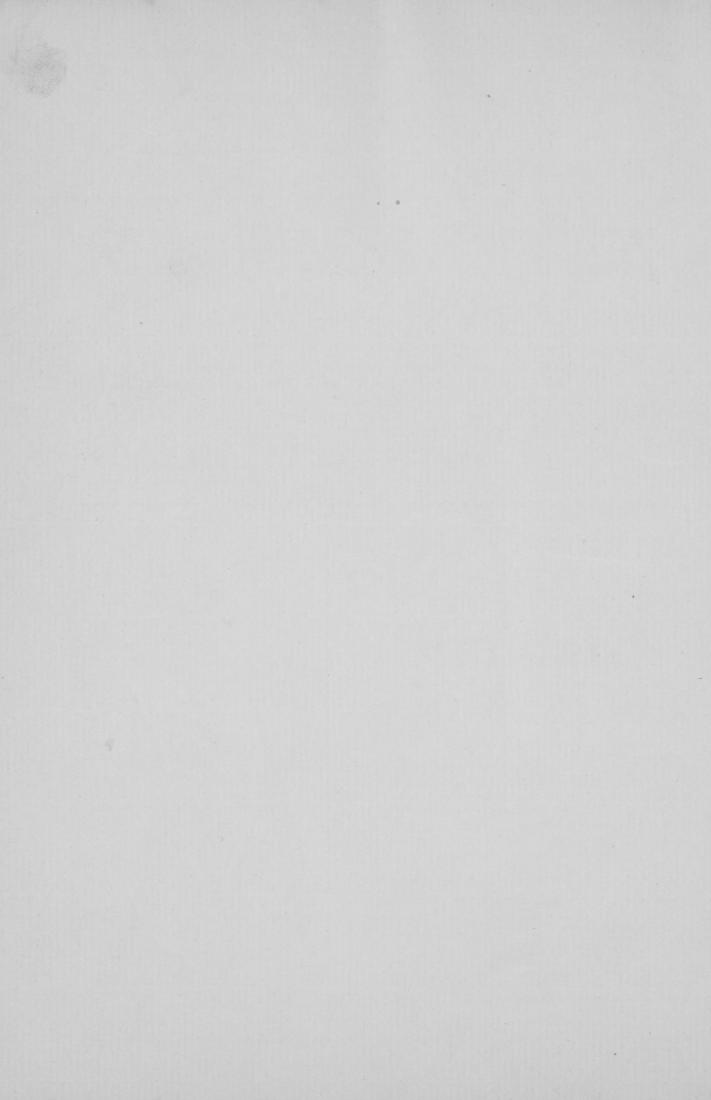
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